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 1            IN THE UNITED STATES DISTRICT COURT
             FOR THE EASTERN DISTRICT OF TEXAS
 2                     TYLER DIVISION


 3
   ERICSSON, INC., ET AL         )
 4                                   DOCKET NO. 6:10cv473
       -vs-                      )
 5                                   Tyler, Texas
                                 )   12:27 p.m.
 6  D-LINK CORPORATION, ET AL        June 5, 2013


 7


 8                  TRANSCRIPT OF TRIAL
                    AFTERNOON SESSION
 9        BEFORE THE HONORABLE LEONARD DAVIS,
      UNITED STATES CHIEF DISTRICT JUDGE, AND A JURY

10


11               A P P E A R A N C E S


12


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23
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24  produced by a Computer.


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 1                    P R O C E E D I N G S

 2               COURT SECURITY OFFICER:  All rise.

 3               (Jury in.)

 4               THE COURT:  Please be seated.

 5               All right, Mr. Stevenson.  You may

 6  continue.

 7         SCOTT NETTLES, Ph.D., PLAINTIFFS' WITNESS,

 8                    PREVIOUSLY SWORN

 9            DIRECT EXAMINATION (CONTINUED)

10  BY MR. STEVENSON:

11      Q.   Dr. Nettles, let's turn to our last patent,

12  the '223 patent, which I call the timer patent.  This

13  one is contained in Tab 5 of the jury notebook.

14           What is the date of filing of this patent?

15      A.   It's filed April -- April 6th, 1999.

16      Q.   And when was the patent issued?

17      A.   February 12th (sic), 2003.

18      Q.   Who's the Examiner?

19      A.   Ken Vanderpuye.

20      Q.   And what is this patent related to and what

21  does it do?

22      A.   Well, this patent is related to this question

23  we've been talking about concerning discarding packets.

24  And what it does is improves on previous techniques for

25  deciding when to discard the packet.
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 1      Q.   So would this be something that is taking

 2 place inside the transmitter?

 3      A.   Yes, sir.

 4      Q.   And how does this relate to the notion of

 5 deciding whether or not to discard -- excuse me, not to

 6 discard -- how does this relate to the notion of whether

 7 or not to try to retransmit a packet?

 8      A.   Well, this is an improvement on how you would

 9 decide not to retransmit a packet.

10      Q.   So if the receiver is transmitting

11 something -- excuse me.

12           If the transmitter is transmitting a bunch of

13 packets and gets back one of those acknowledgements

14 saying some of the packets didn't get received, now the

15 transmitter has a choice, either try to re-do it, or

16 move on?

17      A.   Yes, sir, that's correct.

18      Q.   Does this patent deal with improving the way

19 the transmitter makes that choice?

20      A.   That's exactly what it deals with.

21      Q.   And how does it -- what is the improvement?

22      A.   Well, the improvement involves using a timer

23 to time the lifetime of the packet, and in particular,

24 exactly where in the system to start the timer.

25      Q.   Okay.  Well, why don't we now step back and
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5

1   take a look at how the patent describes it, and I'll

2   direct you to the '223 patent at Column 2, Line 28.

3          Would you read us this portion and explain to

4   us what it's saying?

5      A.   It says:  The number of allowed

6   retransmissions does not translate directly to a finite

7   delay.

8          So at this point in the patent specification,

9   they're explaining the old way of doing it and why

10   that's not such a good way.  And the old way that

11   they're talking about is you allow each packet to be

12   retransmitted a certain number of times.  One time, two

13   times, four times, it doesn't matter.

14          What they're saying is that that count doesn't

15   necessarily correspond to one second or two seconds.  It

16   might be a variable amount of time.  It might even be a

17   very long time.

18      Q.   So one way the transmitter could decide

19   whether or not to retransmit would be to just have a

20   internal rule, I'm only going to try twice.  Give it two

21   shots.  If after two tries, I still haven't gotten this

22   package through, I'm done and I'm moving on.

23      A.   That's exactly right.

24      Q.   The invention of this patent improves on that

25   how?

6

1     A.    Well, by actually timing the packet.  So now

2  instead of just counting the number of times it's being

3  retransmitted, we're actually going to keep track of how

4  old it is, and we're going to be smart about how we do

5  that.

6     Q.    Yeah, I was going to ask, when do you start

7  the timer running?

8     A.    Well, the patent talks about starting the

9  timer at the -- the entrance to the link layer.

10  Imagine that you're going to time how long it takes you

11  to get out of the grocery store.  It wouldn't really

12  make sense to start timing after you finished checking

13  out.  It only makes sense to start timing when you get

14  into the line to check out.  And that's basically what

15  the packet -- the patent's doing.

16     Q.    So does the patent give a specific spot in the

17  transmission sequence when you want to start the timer?

18     A.    Yes, sir, exactly.

19     Q.    I want to explain now about what you said

20  is -- where you started the data link layer or you

21  called it the link layer?

22     A.    Yes, sir.

23     Q.    Do you have a slide that you can use to teach

24  us about this link layer and just what layers are, in

25  general?

7

1       A.    Yes, sir, I do.

2       Q.    All right.  Before we dive into this, tell us

3   what this is supposed to be representing.

4       A.    Well, this is a layer diagram.  It shows how

5   computer scientists and engineers have designed really

6   the whole computer system with respect to the

7   networking.  And it's been broken into layers, and

8   that's to make it simpler to build.

9       Q.    What -- what is the physical layer, at the

10  very bottom?

11      A.    The physical layer at the very bottom, that's

12  the layer that actually sends and receives the physical

13  data.  So that's where the radios really are.  That's

14  where the transmitters and receivers are.  And that's

15  what interacts with the physical world.  Because

16  eventually, when you communicate, you have to do that in

17  the physical world.

18      Q.    Okay.  So if I was looking at my laptop

19  computer, all right, it's got Wi-Fi.  Is the physical

20  layer really the -- whatever is in there sending the

21  radio waves out?

22      A.    Exactly.

23      Q.    Okay.  Now, generally, let's just talk about

24  them altogether -- altogether.

25            What do the layers above the physical layer

8

1  do?

2       A.   Well, they deal with the actual packets we've

3  been talking about, and they process them in various

4  ways.

5            So, for example, the data link layer is what

6  we've been talking about as the MAC, and that's going to

7  concern itself with sending the packets from over a

8  single hop -- so you go from one sender to one receiver.

9            The network layer is going to concern itself

10  with sending the packets across the whole Internet.

11      Q.   Okay.  And let's say I'm sitting at my

12  computer and I'm just surfing the Internet.  I've got

13  my -- my browser up and I'm clicking around and doing

14  stuff and maybe sending e-mails, just doing the usual,

15  which one of these layers am I working at on my

16  computer?

17      A.   You're working at the application layer, so

18  that's that layer that applications run at.

19      Q.   So then if I go to send something -- let's say

20  I send out an e-mail, does that click that causes the

21  send, need to filter down through all these other layers

22  before it can go out on the radio waves, the physical

23  layer?

24      A.   Exactly.

25      Q.   Okay.  Now, the -- the patent talks about the

9

 1  data link layer.

 2       A.    Yes, sir.

 3       Q.    And it singles that out.

 4       A.    Yes, sir.

 5       Q.    What's going on at the data link layer that

 6  would cause this to get singled out?

 7       A.    Well, the specific reason for singling it out

 8  is the physical layer can only send packets out at a

 9  certain rate, depending on how fast the radio is and how

10  many other people are trying to use the radio.

11            And so there has to be -- the application

12  might be sending the packets faster than that, and so

13  there has to be someplace that the packets are going to

14  wait, just like in the grocery store.  And the data link

15  layer is where that's going to happen.  So that's where

16  the queue is going to be, and the reason that we

17  single -- that -- that the patent singles out the data

18  link layer is because that's where the packets are

19  likely sit and wait around and get too old.

20       Q.    After the -- after the packets get into the

21  data link layer, do they next go down to the physical

22  layer to get sent out?

23       A.    Yes, sir.

24       Q.    Is that why the line forms there in the data

25  link layer?

 1       A.    Yes, sir.

 2       Q.    So when you gave us your supermarket checkout

 3   analogy, is the data link layer like the checkout line?

 4       A.    Yes, sir.

 5       Q.    So physical layer would be what in that

 6   analogy?

 7       A.    The process of going out of the grocery store

 8   and getting into your car.

 9       Q.    Okay.  And the application, that's probably

10   just walking around pulling stuff off the shelves?

11       A.    Yeah, it's not a perfect analogy.

12       Q.    And where is it that this timer gets started

13   to figure out how old these packets are?

14       A.    The patent says that it gets started when the

15   packet is transferred from the network layer to the data

16   link layer.  So when it's first received in the data

17   link layer.

18       Q.    And we have the little timer example there.

19       A.    Yes, sir, that's right.

20       Q.    All right.  So then explain to us then, if --

21   if these packets that are going out have to get to the

22   data link layer, they might wait in line there for a

23   little bit.  And I was going to ask you, I forgot, what

24   causes them to wait in line in the data link layer?

25       A.    Well, it's because you can't send them out of

1  the physical layer fast enough, either because the radio

2  is too slow or because other people are using the medium

3  and they're backed up.

4      Q.   Okay.  So if -- if I'm in my house and I have

5  a lot of different things on my wireless network --

6      A.   Yes, sir.

7      Q.   -- and I have -- I've got my laptop and my

8  wife's got hers and my kids have got whatever they have,

9  probably multiple things, the more things that are on

10  the network, does that mean that each device has a

11  little bit shorter period of time that they get to

12  transmit?

13     A.   Yes, sir, it does.

14     Q.   Are those called transmission opportunities?

15     A.   They are.

16     Q.   And so the more stuff you have on your

17  network, does that mean the bigger chance you have of

18  getting a line forming at your data link layer?

19     A.   Yes, sir, plus how fast you're trying to send

20  data.

21     Q.   Okay.  So video versus other things take

22  different --

23     A.   Amounts of bandwidth.

24     Q.   Okay.  So how does the patent then explain

25  using the timer to decide whether -- if the transmitter

12

1  and your packets are getting lost, whether you should

2  retransmit or just move on?

3      A.   Well, it says you should start the timer at

4  the beginning of the data link layer; and when the timer

5  expires, you should discard the packet.

6      Q.   Okay.  Let's talk about 802.11n now.

7           Which of the Defendants use this improvement?

8      A.   This improvement is found in the Intel chips.

9  And when the computer Defendants use Intel chips,

10  they're using this improvement.

11      Q.   Is this one -- is this patent, in particular,

12  required for interoperability?

13      A.   No, sir.  You -- you can achieve

14  interoperability if you don't -- if you don't use this

15  particular invention.

16      Q.   Let's go to the claims.

17           This claim is a transmitter for transmitting

18  data packets over an air interface.  Is this another

19  apparatus claim?

20      A.   Yes, sir, it is.

21      Q.   So in looking at the apparatus claim, do we

22  need to look at the limitations and see if those are

23  physically present in the device?

24      A.   Yes, sir.

25      Q.   And then the functional language, the -- the

13

 1  apparatus needs to be capable of performing?

 2       A.   That's right.

 3       Q.   All right.  So let's -- let's go here, and

 4  there's going to be a lot of terminology -- computer

 5  terminology, and I'm just going to suggest we go through

 6  the element and have you explain as we go.

 7       A.   Okay.

 8       Q.   The first element is a data link layer.  Do

 9  the accused -- for this patent -- products have a data

10  link layer?

11       A.   Yes, sir.

12       Q.   And are data link layers -- I mean, are they

13  pretty typical in wireless networking products?

14       A.   Well, yes, sir.  We -- we actually typically

15  call them the MAC in a wireless networking product.

16  That's what I would call them in my research.  But

17  they're -- they're acquired.  They're not -- they're not

18  even -- they're not optional.

19       Q.   And then do the -- in the accused products,

20  does that data link layer receive a service data unit

21  containing a plurality of data packets?

22       A.   Yes, sir, it does.

23       Q.   And then it goes on to say, said data link

24  layer segmenting said service data unit into at least

25  one protocol data unit.

14

1       A.   Yes, sir.

2       Q.   So what is this service data unit in the

3  802.11n?

4       A.   Well, in 802.11n, it's an MSDU, a MAC service

5  data unit.

6       Q.   So -- and is that -- you're not making up that

7  language.  Is that what's actually in the standard, they

8  call it an MSDU?

9       A.   Yes, sir.  If I was making it up, it would be

10  easier to understand.

11       Q.   And they call it a MAC service data unit

12  because --

13       A.   It's -- it's the -- it's the data unit that

14  the MAC is providing the service for.  So it's the data

15  unit that's getting transferred between network layer

16  and the MAC.

17       Q.   Now, it says the data link layer must segment

18  said service data unit.  Is that going back to this

19  service data unit here?

20       A.   Yes, sir, it is.

21       Q.   And that's the MSDU?

22       A.   Yes, sir, it is.

23       Q.   Into at least one protocol data unit?

24       A.   Yes, sir.

25       Q.   And tell me what an MSDU is?  Can you just

15

1   paint me on mental picture of what it would look like?

2        A.   It's a -- it's a packet.   In the most typical

3   case, it would be a packet that had been created by the

4   Internet protocol at the network layer.   So if you

5   looked at it, it would have compartments that indicated

6   it was an IP packet.

7             Then inside of it there would be a payload,

8   and that payload would -- this is like -- it's like

9   those Russian dolls again.   That payload would indicate

10  it's a packet that's from TCP or EDP, and that payload

11  would indicate that it was a packet that was from some

12  higher level protocol.

13       Q.   But this -- we can think of this as a packet?

14       A.   Yes, sir.

15       Q.   And then what happens -- what is a protocol

16  data unit, and how does it differ from a service data

17  unit?

18       A.   In the standard and in the Intel products, the

19  protocol data unit is the MPDU, MAC protocol data unit,

20  and that's the kind of packet that the MAC actually is

21  exchanging with the MAC on the other side.

22            So each of the layers communicate with their

23  peer on the other side at the receiver.   So the MPDU is

24  what the MAC on the transmitter is communicating to the

25  MAC on the receiver.

 1      Q.   And what -- what -- does a protocol data unit

 2   have additional information, different information than

 3   a service data unit?

 4      A.   Yes, sir.  We've been seeing pictures of these

 5   protocol data units, and so what you're going to do is

 6   you're going to take the service data unit and you're

 7   going to add stuff -- actually in this case you're going

 8   to add it to the front and the back -- that's going to

 9   let the MACs communicate.  And that's called

10   encapsulation.

11      Q.   So what we've seen is, I think -- we've seen a

12   lot of these drawings, you know, with all the boxes in

13   them, and those are different kinds of packets?

14      A.   Yes, sir.

15      Q.   And what we have here is a kind called the

16   service data unit that is called in the standard an

17   MSDU?

18      A.   Yes, sir.

19      Q.   And then it turns into a protocol data unit,

20   and that's something different that's got a little more

21   information with it?

22      A.   Yes, sir.  If you remember the picture we saw

23   for the last patent where there was a payload, you'd put

24   the MSDU in the payload and once you put it in the

25   payload, then it would be an MPDU.

17

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 1      Q.   It's like -- sort of like driving a car inside

 2  a truck and then just driving away?

 3      A.   Yes, sir.

 4      Q.   All right.  Now I understand that.  All right.

 5  So it says it has to be segmented.

 6      A.   Yes, sir.

 7      Q.   And you may recall in opening statement, the

 8  defense counsel said, well, segmenting, you got to chop

 9  it up in pieces.  I think we saw a picture of a picture,

10  you know, chopped up in three pieces.  Do you remember

11  that?

12      A.   I saw that picture, and I read the transcript,

13  yes, sir.

14      Q.   Okay.  Now, what does the claim language which

15  governs the scope of infringement actually require in

16  terms of segmenting?

17      A.   It says that you have to segment said service

18  data unit into at least one protocol data unit.

19      Q.   I mean, we've seen, in other patents we've

20  just looked at, the word plurality.  Do you remember

21  seeing that?

22      A.   Yes, sir.

23      Q.   That was one of the first ones.  What does

24  plurality mean to you when it's used in patent claims?

25      A.   More than one.
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18

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 1       Q.    Two or more?

 2       A.    Two or more.

 3       Q.    Does plurality appear here?

 4       A.    No, sir.  It's at least one.

 5       Q.    So if you segment a service data unit into one

 6  protocol data unit, does that meet the claim limitation?

 7       A.    Yes, sir, it does.

 8       Q.    What if you segment it into two?

 9       A.    That still meets it.

10       Q.    Three?

11       A.    Any number.

12       Q.    One or more?

13       A.    One or more.

14       Q.    Is that what's meant by at least one?

15       A.    Yes, sir.

16       Q.    Does that occur in the products of the

17  Defendants that you've identified as using this

18  technology?

19       A.    Yes, sir, it does.

20       Q.    Let's go on to the second element now, a

21  discard timer.

22             Do the accused devices for this claim have a

23  discard timer?

24       A.    Yes, sir, they do.

25       Q.    And is it for monitoring the retransmission
```

19

1  time of said at least one protocol data unit to said

2  receiver?

3       A.   Yes, sir, that's how it works.

4       Q.   And tell us, in general, in the accused

5  devices how the mechanics of the timer actually work.

6       A.    When you receive the MSDU and just before you

7  turn it into an MPDU, you read the system clock.  These

8  systems have clocks.

9       Q.    And when you're saying you, are you talking

10  about --

11       A.   I'm sorry, the transmitter.

12       Q.   -- the transmitter?

13       A.   I apologize.

14       Q.   I know -- you know, I do that, too, but the

15  transcript has to be a little bit --

16       A.   I -- I do understand.  It's just force of

17  habit.

18       Q.   And you'll stop me when I do it.

19       A.   I'll try to.

20            So the transmitter -- the code in the

21  transmitter is going to read that system clock, and it's

22  going to record the time in the MSDU so that we know

23  when the MSDU came into the data link layer.  And then

24  later on, it's going to read the time and it's going to

25  compare it to the current time and it's going to see if

1   the timer has expired.  And this is a very standard way

2   that computers keep track of timers.

3        Q.   How do you know that that's what's going on in

4   the Intel chips?

5        A.   Because I read the code that does this.

6        Q.   The source code?

7        A.   Yes, sir.

8        Q.   And -- and we talked about that yesterday and

9   some of us may have forgotten, but could you refresh us

10  on what source code is and how that helps you identify

11  these limitations that are in the claims?

12       A.   Well, the source code is the -- the human --

13  if you're a computer programmer, human, readable

14  description of what the program that's going to be put

15  into the device does.  And it helps -- you know how the

16  device works because it's the instructions that the

17  programmers have used to tell the device how to work.

18       Q.   And is that timer you mentioned, going through

19  that process, initialized when the service data unit is

20  received by the data link layer?

21       A.   Yes, sir, it is.

22       Q.   The next part of this element states that the

23  service data unit being discarded by said data link

24  layer when an acknowledgement message is not received

25  for each said at least one protocol data unit and said

1  discard timer expires.

2        Can you help us get our heads around what that

3  means before we get back into this and make sure those

4  elements are met?

5      A.   Well, remember you're going to be getting back

6  these acknowledgement messages which say whether or not

7  the packets have been received by the receiver or not.

8        If you get back a discard -- if you get back

9  an acknowledgement that says the packet has been

10  received, then there's no reason to think about

11  retransmitting it.  But if you get back an

12  acknowledgement message that says that the packet hasn't

13  been received, then before you retransmit it, you're

14  going to check this timer to see if it expired; and if

15  it expired, you're going to throw it away instead of

16  retransmitting it.

17      Q.   And does -- is the service data unit, in fact,

18  discarded by the data link layer when an acknowledgement

19  message is not received for each said at least one

20  protocol data unit and the timer expires?

21      A.   Yes, sir.

22      Q.   That happens in the accused products?

23      A.   That's right.

24      Q.   And would you remind me which of the

25  Defendants utilize this timer in the data link layer?

```
 1       A.    The computer Defendants utilize this.

 2       Q.    Acer, Dell --

 3       A.    Dell and Toshiba.

 4       Q.    -- as well as Intel?

 5       A.    Yes, sir.

 6       Q.    So did you find Claim 11 to be infringed?

 7       A.    Yes, sir.

 8       Q.    And do you have -- and I forgot to show a

 9  slide, but have you seen testimony from -- related to

10  the discard timer actually being used in the Intel

11  devices?

12       A.    Yes, sir.  There was Intel testimony about

13  that.

14             Can we -- can we see the slide?

15       Q.    Yes.  And this -- this is a deposition?

16       A.    Yes, sir, this is a deposition.

17       Q.    Of one of the Intel engineers?

18       A.    Yes, Duncan Kitchin.

19       Q.    And what did he say?

20       A.    He says -- so the question is when is the

21  transmit MPDU discarded.  And he -- and the important

22  part here is:  The other is if the timestamp, which is

23  being set on the MPDU, is determined to be in the past

24  with respect to the current time, at which point the

25  packet -- at which point it would be discarded.
```

1          So this is saying when the timer as

2  implemented by the timestamp expires.

3      Q.   All right.  Well, thank you, Dr. Nettles.

4  Just a couple of wrap-ups.

5          I know you've done a lot of work in this case

6  in studying these products, and we appreciate your

7  testimony.  Have you personally run an 802.11n product

8  for each Defendant --

9      A.   Yes.

10      Q.   -- both in this case and just in your everyday

11  life?

12      A.   Yes, sir, I have.

13      Q.   And as a result have you -- in addition to

14  other users, personally practiced these methods?

15      A.   Yes, sir, I have.

16              MR. STEVENSON:  I'll pass the witness,

17  Your Honor.

18              THE COURT:  All right.

19              Cross-examination.

20              MR. VAN NEST:  I'll need just a moment,

21  Your Honor.

22              THE COURT:  All right.

23              (Pause in proceedings.)

24              MR. VAN NEST:  Thank you.

25                  CROSS-EXAMINATION

24

 1   BY MR. VAN NEST:

 2        Q.    Good afternoon, Dr. Nettles, and everyone.

 3        A.    Good afternoon.

 4        Q.    We have the privilege, again, of spending that

 5   critical post-lunch/early-afternoon time together, Dr.

 6   Nettles, so we'll have to be as entertaining as we can

 7   be.

 8        A.    Yes, sir.

 9        Q.    I want to get into the claims and the products

10   in just a minute, but I want to start with some

11   questions upfront about some of the testing that you

12   said you did.

13        A.    Yes, sir.

14        Q.    You mentioned last night and again today that

15   you had tested some of the products along the way as

16   part of your infringement analysis?

17        A.    Yes, sir, that's correct.

18        Q.    And put some of the testing data in your

19   reports and so on?

20        A.    Yes, sir.

21        Q.    Now, you didn't actually do that testing

22   yourself, did you?

23        A.    The testing data that's in the reports, I did

24   not do myself, that's correct.

25        Q.    No, that was actually done in Bangalore,

25

 1  India, right?

 2       A.    Yes, sir, that's correct.

 3       Q.    Done in a facility you never even visited?

 4       A.    Yes, sir, that's correct.

 5       Q.    Done by people who at least as of a month ago

 6  you couldn't even identify for us, right?

 7       A.    Yes, sir, that's correct.

 8       Q.    You never went to supervise, you never went to

 9  observe.  You sent it over there, and you got the

10  results back, correct?

11       A.    Well, I interacted with them by phone, but,

12  yes, that's correct.

13       Q.    Now, the work was done by what you call a

14  litigation support company, right?

15       A.    I don't think that's what I said, but, yes,

16  sir, that's correct.

17       Q.    All right.  And that's a company that helps

18  people that they know are in lawsuits with other people,

19  right?

20       A.    Yes, sir.

21       Q.    Now, some of the testing that you did was done

22  on products that aren't even accused of infringement,

23  right?

24       A.    Yes, sir.

25       Q.    And that's because, in your view, all that

 1  matters is the chips, right?

 2      A.   Yes, sir, that's correct.

 3      Q.   You said this case is about the chips; that's

 4  what matters, and so that's what I tested.  Right?

 5      A.   No, sir, I can't agree with that.

 6      Q.   Well, what you said was it's the Wi-Fi chips

 7  that are at issue in this case, and that's what I

 8  tested?

 9      A.   Yes, sir, I agree with that.

10      Q.   So, for example, you would agree that many,

11  many, many of the laptops that are accused of

12  infringement in this case run on what we all know as

13  Microsoft Windows, right?

14      A.   Yes, sir.  That's the most common operating

15  system.

16      Q.   And in your initial set of tests that you had

17  done in India and put in your report, you didn't even

18  test a device running Windows, right?

19      A.   Yes, sir, that's correct.

20      Q.   What you did instead was you tested a device

21  running something called Fedora 16 --

22      A.   Yes, sir --

23      Q.   -- right?

24      A.   -- that's correct.

25      Q.   And as far as you know, there's no accusation

 1  whatsoever in this case that any device running Fedora

 2  16 infringes, right?

 3      A.   Yes, sir, that's correct.

 4      Q.   And, again, the reason you didn't care what

 5  the laptop software was, is that you believe the issue

 6  in this case is the Wi-Fi chips, right?

 7      A.   Yes, sir, I'd agree with that.

 8      Q.   Now, I want to get right into the '568, and I

 9  want to put the claim up.

10           MR. VAN NEST:   Your Honor, may I approach

11  the board?

12           THE COURT:   Yes, you may.

13      Q.   (By Mr. Van Nest)  See if I can get this up

14  high enough for our jurors to see.

15           The '568, that's one of the patents we've been

16  hearing about in the case, right?

17      A.   Yes, sir, it is.

18      Q.   I believe this one is behind Tab 4, and you

19  refer to this as the service-type identifier patent,

20  correct?

21      A.   Yes, sir.

22      Q.   As I think you've said, the job for our jurors

23  on determining infringement is to determine whether each

24  and every claim of -- each and every element of this

25  claim are found in the products, right?

                                                            28

1        A.    Yes, sir, that's the required analysis.

2        Q.    So the comparison is between the claim and the

3   Defendants' products:  The laptops and so on, correct?

4        A.    Yes, sir.

5        Q.    And I noticed that during the three or four

6   hours that you were up on the stand, we saw a lot from

7   the standard; but we didn't really see much information

8   about the products.  Right?

9        A.    No, sir, I can't agree with that.

10       Q.    But you would agree that the comparison that

11   we're to make in determining infringement is between the

12   claim and the products, right?

13       A.    Yes, sir.

14       Q.    Okay.  So you mentioned in connection with the

15   '568, something called quality of service, right?

16       A.    Yes, sir, I did.

17       Q.    That's treating different packets differently?

18       A.    Yes, sir.  It's a specific example of that.

19       Q.    Giving them different priority?

20       A.    Yes, sir.

21       Q.    Now, certainly Ericsson didn't invent quality

22   of service.  That's been around for a long time, right?

23       A.    Oh, absolutely, sir.

24       Q.    Yeah.  And Ericsson didn't invent

25   prioritization of data packets either?

 1       A.   No, of course, not.

 2       Q.   I think the words you used were this patent

 3  and others were specific enhancements and improvements

 4  to what existed before, right?

 5       A.   I did say that in some cases, yes.

 6       Q.   So in the case that we have here, the key

 7  disputed term is this service type identifier which we

 8  see highlighted in yellow on the board, right?

 9       A.   Yes, sir, I would agree with that.

10       Q.   That's sort of the key to this invention, and

11  that's the term that we're debating in this case?

12       A.   Yes, sir.

13       Q.   So that element must be found in the

14  Defendants' products in order to establish infringement,

15  right?

16       A.   As defined by the Court, yes, sir.

17       Q.   And even if all the other elements are there,

18  if this one is missing, there's no infringement, right?

19       A.   Absolutely.

20       Q.   So you'd agree with me that if our jurors

21  conclude that that element cannot be found in the

22  products on this particular patent, the answer is no

23  infringement?

24       A.   Yes, sir.

25       Q.   Right?

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 1              Now, Judge Davis has defined the claim and we

 2  have that at the bottom, and that's the definition that

 3  you've applied in doing your analysis, correct?

 4      A.    Yes, sir, it is.

 5      Q.    And that's the definition that we all have to

 6  apply in determining whether there's infringement in

 7  this case, right?

 8      A.    That's correct.

 9      Q.    And the definition of service type identifier

10  is something that identifies the type of information

11  conveyed in the payload, right?

12      A.    Yes, sir.

13      Q.    And the examples the Court gave were video,

14  voice, data, and multimedia -- not limited to that, but

15  those are the examples that appear in the Court's

16  definition, correct?

17      A.    Exactly.

18      Q.    And I think the examples you gave this morning

19  during your testimony were voice and e-mail and data and

20  the like, just as we have here in the claim?

21      A.    Yes, sir.

22      Q.    Right?

23              And you heard Mr. Raith, one of the inventors

24  was here yesterday.  He talked about -- wasn't here, it

25  was on video -- voice, video, maps, and graphics,
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1  correct?

2      A.   Yes, sir.

3      Q.   And you'd agree that those are all the kinds

4  of information:  Video, voice, data, multimedia --

5  they're all the kind of information that can be carried

6  in these patents we've been talking about, right?

7      A.   Yes, sir.

8      Q.   They appear in the payload of those little

9  packets that are moving back and forth on our video,

10  your video, and all the videos we've shown, right?

11      A.   Absolutely.

12      Q.   Now, you have identified a feature in the

13  Defendants' products that you say is the service type

14  identifier, right?

15      A.   Yes, sir, I have.

16      Q.   And that's the TID field, correct?

17      A.   Yes, sir.

18      Q.   What I would like to do is get a second easel.

19           MR. VAN NEST:  Could I get a second easel

20  up over here, please?

21      Q.   (By Mr. Van Nest)  Now, the TID field -- I'll

22  put this here.  The TID field is the feature that you

23  have identified in Defendants' products that, according

24  to you, is the service type identifier, correct?

25      A.   Yes, sir, that's correct.

32

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 1       Q.    Now, you've been referring to that all

 2  morning --

 3                 MR. VAN NEST:  Can I have a pencil?

 4       Q.    (By Mr. Van Nest) -- all morning as a type

 5  identifier, right?

 6       A.    Yes, sir.

 7       Q.    Actually that's not correct.

 8             In the standard, it's called a traffic

 9  identifier, right?

10       A.    Yes, sir, actually I think that's correct.

11       Q.    So -- because you -- this morning we were

12  talking about a service type patent and a type

13  identification patent.  You called this a type

14  identifier.  It's actually a traffic identifier, right?

15       A.    I think that's what the standard calls the

16  TID, yes, sir.

17       Q.    And that's because it's related to the

18  priority that the traffic gets; isn't that right?

19       A.    No, sir.  I think it's because it's related to

20  the type of the traffic.

21       Q.    Now, this TID subfield that you've identified,

22  that's the only element in Defendants' products that you

23  claim is the service type identifier, right?

24       A.    Yes, sir, that's correct.

25       Q.    So that's the thing that the jurors have to
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 1  focus on, this TID traffic identifier?

 2      A.   Yes, sir, I agree with that.

 3      Q.   And that traffic identifier has to identify

 4  the type of information conveyed in the payload, right?

 5      A.   Yes, sir.

 6      Q.   Now, the -- the TID subfield in Defendants'

 7  products is actually used to establish priority, isn't

 8  it?

 9      A.   That's one of its uses, yes, sir.

10      Q.   In other words, the value that's assigned in

11  the TID field determines what the priority is for the

12  data, right?

13      A.   Yes, sir, in part.

14      Q.   And that priority determines what queue --

15  what transmission queue the packet receives as it comes

16  into the transmitter, right?

17      A.   Actually I believe it's as it goes out of the

18  transmitter, but --

19      Q.   Fair enough.

20      A.   -- you're correct.

21      Q.   And the higher the number, the greater the

22  priority?

23      A.   Yes, sir.

24      Q.   So a 7 or a 6 or a 5, those priorities are

25  higher than a 0, a 1, or a 2, right?

34

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 1      A.   Yes, sir.

 2      Q.   And those priorities determine how quickly

 3 that packet moves out of the transmitter to the

 4 receiver?

 5      A.   In part, that's correct.

 6      Q.   That's the whole -- that is at least the

 7 primary purpose, if not the only purpose, of the TID

 8 subfield, right?

 9      A.   No, sir, I can't agree with that.

10           MR. VAN NEST:  Now, could we put up 9-1

11 from the standard?

12      Q.   (By Mr. Van Nest)  We looked at this this

13 morning.  You showed this to our jurors this morning.

14           And this is from the standard?

15      A.   Yes, sir, it is.

16      Q.   And your understanding is -- your conclusion

17 is that the Defendants' products work in accordance with

18 this?

19      A.   Yes, sir.

20      Q.   Right?

21           And on the second to the left column there --

22           MR. VAN NEST:  If we can highlight the

23 top.

24      Q.   (By Mr. Van Nest)  -- UP, that stands for user

25 priority, right?
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 1        A.   Yes, sir, it does.

 2        Q.   And those values below it, those are the TID

 3  values that go in the TID subfield?

 4        A.   Yes, sir.

 5        Q.   And those priorities correspond to what are

 6  called access categories in the Column 2 to the right,

 7  right --

 8        A.   Yes, sir.

 9        Q.   -- AC?

10        A.   Yes, sir, that's correct.

11             MR. VAN NEST:   Can we highlight that, the

12  top of that?

13        Q.   (By Mr. Van Nest)   And the way the system

14  works if you have a priority of 2 --

15             MR. VAN NEST:   Let's highlight 2.

16        Q.   (By Mr. Van Nest)   -- you have an access

17  category of AC_BK, right?

18        A.   Yes, sir.

19        Q.   And if you have an access -- if you have a

20  priority value of 5, you have an access category of

21  AC_VI, right?

22        A.   Yes, sir, that's correct.

23        Q.   And those categories determine where you are

24  in the queue and the transmitter, right?

25        A.   Which queue?

 1      Q.   Which queue?  So let's take a look at Figure

 2  9-1 -- excuse me, 9-17.  This is also a picture from the

 3  standard, and what we're seeing on the page here is four

 4  queues from left to right, correct?

 5      A.   Yes, sir.

 6      Q.   And the purpose of the TID value is to assign

 7  packets to one or the other of those queues, right?

 8      A.   That's one of its purposes, yes, sir.

 9      Q.   And the number that the TID value represents,

10  those all line up with the queues we see on the page,

11  right?

12      A.   Yes, sir, that's correct.

13      Q.   The higher the number, the faster the queue?

14      A.   It's not quite correct, but generally

15  speaking, yes, sir.

16      Q.   Now, those TID values, then, reflect how the

17  data is going to be treated in the device, right?

18      A.   Yes, sir.  That's the purpose of this

19  invention.

20      Q.   They determine how the data's to be treated;

21  but they don't necessarily reflect the type of data

22  that's in the payload, right, sir?

23      A.   I would agree with that.

24      Q.   So what they establish is how the system will

25  treat them, not the kind of information conveyed in the

37

1  payload?

2       A.   No, I can't agree with that in general.

3       Q.   So looking at a -- let's back up, then.

4              MR. VAN NEST:  Could I play from Dr.

5  Nettles' deposition from Page 351, Lines 15 through 21,

6  please?

7              (Video clip playing.)

8              QUESTION:  Access categories relating to

9  the designations in the designation column of Table 9-1

10  do not necessarily reflect the type of information in

11  the payload of packets that are transmitted from

12  applications?

13             ANSWER:  Right.  What they rep -- what

14  they reflect is how 802.11 is going to treat that data.

15             (End of clip.)

16      Q.   (By Mr. Van Nest)  Do you stand by that

17  testimony, Dr. Nettles?

18      A.   Yes, sir, I do.

19      Q.   So it is not apparent to the system, looking

20  at the TID value, whether the data in the payload is

21  video, voice, multimedia, or otherwise, correct?

22      A.   What part of the system are you referring to?

23      Q.   The transmitter, the receiver, or any part

24  thereof?

25      A.   I don't think I can agree with you in general

 1  about that.

 2                    MR. VAN NEST:  Let's play from Dr.

 3  Nettles' deposition, Page 346, Line 18 to 347, Line 4.

 4                    (Video clip playing.)

 5                    QUESTION:  Is it correct that -- that

 6  nothing in the accused devices that implement 802.11

 7  functions looks at the payload of a data packet and,

 8  from that, identifies the type of information that's

 9  actually in the payload in order to figure out which

10  user priority to put in the TID field?

11                    ANSWER:  I mean, that's -- that's

12  correct.  There's really no -- I mean, the way the

13  layered system works, whether or not it's voice or video

14  or whatever, is not apparent from examining it.

15                    (End of video clip.)

16      Q.   (Mr. Van Nest)  Do you stand by that

17  testimony, Dr. Nettles?

18      A.   Oh, yes, sir, I do.

19      Q.   So whether the information conveyed in the

20  payload is voice or video is not apparent from looking

21  at the TID value, correct?

22      A.   At the 802.11, yes -- level, yes, sir,

23  correct.

24      Q.   Now, if you look at a TID value of zero, for

25  example, you can't tell whether the information in the

39

1  payload is voice, video, data, or multimedia, can you?

2       A.   That's correct.

3       Q.   And just because you're using a TID value of

4  6, you can't tell whether that data in the payload is

5  video or voice or something else, correct?

6       A.   Yes, sir.

7       Q.   Because the user -- the user has the choice of

8  assigning any TID value that he or she chooses, right?

9       A.   Yes, sir.

10      Q.   They're not bound to assign a 6 to video data,

11  correct?

12      A.   Oh, no, sir, not at all.

13      Q.   They're not bound to assign a 4 to voice data,

14  right?

15      A.   Yes, sir.

16      Q.   They can assign any value they want, and

17  that's why the system can't determine, from the TID

18  value alone, whether or not the data conveyed in the

19  packet is video, voice, multimedia, or anything else,

20  correct?

21      A.   Yes, sir.

22      Q.   Let's move on to the '215.

23           That's what you call the type identifier

24  patent.

25           Now, this is a patent that relates to ARQ,

40

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 1  correct?

 2      A.   Yes, sir, it is.

 3      Q.   And I think you said this this morning; but

 4  just to be sure, Ericsson didn't invent ARQ technology,

 5  did they?

 6      A.   Oh, no, sir.

 7      Q.   That's been around for quite a long time?

 8      A.   Yes, sir.

 9      Q.   And they didn't invent BlockAcks, right?

10      A.   No, sir.

11      Q.   They didn't invent aggregated packets or

12  sending packets in groups?

13      A.   No, sir.

14      Q.   That's been around.

15           Again, what they claim to have invented are

16  specific enhancements and improvements to the ARQ

17  system, correct?

18      A.   Yes, sir, that's correct.

19      Q.   Now, this patent is a method claim, so as you

20  said this morning, in order to establish infringement,

21  the products have to perform each one of the methods --

22  each one of the steps contained in the claim, correct?

23      A.   Yes, sir.  That's how the analysis works.

24      Q.   So, again, you're comparing the claims to the

25  products?
```

1       A.   Yes, sir.

2       Q.   Now, you said the crux of this invention

3   involves the creation of choice in the receiver from a

4   number of different message types, right?

5       A.   No, sir, I can't agree with that.

6            MR. VAN NEST:  Can we play from Dr.

7   Nettles' deposition at Page 429, Lines 14 through 20?

8            (Video clip playing.)

9            QUESTION:  Do you agree that the crux of

10   the invention involves the creation of choice in the

11   receiver of multiple different formats of messages to

12   use?

13            ANSWER:  Well, I would -- I would tend to

14   agree.  Certainly the Court apparently agreed.  But

15   really, to answer any of these questions definitively,

16   I'd need to look at the transcript, I think, that's

17   cited to here.

18            (End of video clip.)

19       Q.   (By Mr. Van Nest)  Now, Dr. Nettles, the

20   element that we are disputing with respect to the '215

21   is the one highlighted in the middle of the page,

22   correct?

23       A.   Yes, sir.  I think there's agreement that the

24   first two elements are met.

25       Q.   Well --

42

 1                 MR. VAN NEST:  May I approach the board,

 2  Your Honor?

 3                 THE COURT:  Yes, you may.

 4       Q.   (By Mr. Van Nest)  Obviously, this one is

 5  sending a plurality of data units over a link.  That's

 6  just routine.  Every system does that, right?

 7       A.   Oh, yes, sir.

 8       Q.   And receiving the data units, every system

 9  does that?

10       A.   Yes, sir.

11       Q.   So this is the key to the invention here.

12  It's the one we've highlighted, right?

13       A.   Yes, sir, that -- I've agreed with you about

14  that before.

15       Q.   Okay.  And what the claim requires is

16  responsive to the receiving of the data, constructing a

17  message field for a second unit, said message field,

18  including the type identifier, correct?

19       A.   Yes, sir.

20       Q.   This is talking about the acknowledgements

21  that go from the receiver back to the transmitter, as

22  you said this morning?

23       A.   Yes, sir, that's correct.

24       Q.   So as we saw in the opening and we saw this

25  morning, we're talking about the packets going to the

 1   receiver and acknowledgements coming back, right?

 2       A.   Yes, sir.   That's how these systems work.

 3       Q.   This particular patent relates to those

 4   acknowledgements, right?

 5       A.   Yes, sir.

 6       Q.   And, again, Judge Davis has defined the

 7   claim -- defined the term, correct?

 8       A.   Yes, sir.

 9       Q.   And this is binding on everyone in the case?

10       A.   Absolutely.

11       Q.   The type identifier field is something that

12   identifies the message type of the feedback response

13   message.   That's the acknowledgement message, right?

14       A.   Yes, sir.

15       Q.   From a number of different message types,

16   right?

17       A.   Yes, sir.

18       Q.   That's what the claim with the claim language

19   requires, right?

20       A.   Yes, sir, exactly.

21       Q.   And Ericsson's lawyer said in his opening

22   statement that the invention of the '215 is permitting

23   the generation of multiple types of acknowledgement

24   messages.

25            Do you agree with that?

                                                                44

1         A.   Yes, sir, I do.

2         Q.   So this patent requires that you have the

3    capability to generate -- I will quote it again --

4    multiple types of acknowledgement messages, right?

5         A.   Yes, sir, that's my understanding.

6         Q.   And I believe that Mr. Schon, who also

7    testified by video yesterday, confirmed that the key to

8    this patent is providing a choice of different types of

9    message acknowledgements to send.

10             Do you remember that testimony, Dr. Nettles?

11        A.   I don't remember it specifically, but I'll

12   take your word for it.

13             MR. VAN NEST:  Let's put --

14        Q.   (By Mr. Van Nest)  I don't want you to have to

15   do that.  Let's put -- put this up.

16             Were you here when -- when the video of Mr.

17   Schon was played?

18        A.   Yes, sir, I was.

19        Q.   Yeah.  He said:  Yeah, I think we talked about

20   that a lot.  And we talked about this type identifier

21   field.  That's really the key element here, giving you

22   the choice of using a bitmap or a list or a combination

23   thereof.

24             Do you recall that testimony?

25        A.   I do now that I see it.

 1      Q.   Okay.   And that's consistent with your

 2   understanding of what the key to this invention is,

 3   right?

 4      A.   Yes, sir, it is.

 5      Q.   You'd accept -- you'd accept that -- that

 6   definition?

 7      A.   Yes, sir, I would.

 8      Q.   Okay.   So if the product is only capable of

 9   sending one message and one message type, it doesn't

10   meet the requirements of this claim, does it?

11      A.   No, sir.   I don't agree with that.

12              MR. VAN NEST:   Could we play from Page

13   440, Lines 3 through 14, from Dr. Nettles' deposition?

14              (Video clip playing.)

15              QUESTION:   Okay.   But to be clear,

16   that -- to be clear, a system that can only use one

17   message type, it can't choose to use other message

18   types.   That is not covered by the claims of the '215

19   patent; is that correct?

20              ANSWER:   If there is only one message

21   type, there can't be identifying from a number of

22   different message types.   But if there's more than one

23   message type and the system simply just uses one

24   consistently, then that system can definitely infringe

25   the patent.

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 1                    (End of video clip.)

 2        Q.    (By Mr. Van Nest)   Do you stand by that

 3   testimony, Dr. Nettles?

 4        A.    Oh, yes, sir, absolutely.

 5        Q.    So what you said was -- just so I'm sure -- if

 6   there is only one message type, there can't be

 7   identifying from a number of different message types.

 8   That's what you said, right?

 9        A.    I said some additional things, but, yes, sir,

10   that's correct.

11        Q.    You said that, and you'll stand by it?

12        A.    With the additional statements I made, yes,

13   sir.

14        Q.    Now, you actually performed -- I guess in

15   India again -- a whole series of tests to see whether

16   Defendants' products can send more than one message

17   type, right?

18        A.    Yes, sir, I -- I performed experiments to see

19   what kind of message type they sent.

20        Q.    Well, you performed experiments that would

21   determine if it was there, each and every one of the

22   different message types that a Defendant product could

23   send, right?

24        A.    No, sir, I can't agree with that.

25        Q.    What you determined was that Defendants'

47

1  products only send a single message type every time,

2  right?

3      A.   Oh, yes, sir, I agree with that.

4      Q.   And I think, as you said this morning during

5  your direct examination, the only kind of message type

6  that Defendants' products are even capable of sending is

7  a compressed bitmap, right?

8      A.   That's the only kind they send, yes, sir.

9      Q.   And that's the only kind they are capable of

10  sending because they're hardwired; isn't that correct,

11  Dr. Nettles?

12     A.   No, sir, I don't agree with that.

13     Q.   How many different Defendant products did you

14  test to see if you could find a different form of

15  message type than the compressed bitmap?

16     A.   Well, I tested all of the -- all of the

17  different kinds of chips, and I tested a variety of

18  different Defendants' products.

19          But I agree that they only send compressed

20  BlockAcks.

21     Q.   And this is a patent which has two claims, at

22  least two claims at issue, Claim 1 and Claim 2, correct?

23     A.   Yes, sir.

24     Q.   And Claim 2 is dependent on Claim 1, right?

25     A.   Yes.

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 1      Q.   And that means that if all the elements of

 2  Claim 1 are not met by Defendants' products, Claim 2

 3  isn't infringed either, right?

 4      A.   Yes, sir, that's how the analysis works.

 5      Q.   So that if jurors were to conclude that

 6  because Defendants' products only send a single form of

 7  message type and don't select from a number of different

 8  message types, that would resolve Claim 1 and Claim 2 of

 9  the patent, right?

10      A.   Yes, sir, it would.

11      Q.   And the result of that would be no

12  infringement of either of those two claims?

13      A.   Yes, sir.

14      Q.   Now, you referred this morning to something

15  called the coordination patents?

16      A.   Yes, sir.  That, I think, was a shorthand to

17  talk about the similarities between the two patents,

18  yes, sir.

19      Q.   Shorthand because the word doesn't appear in

20  the claims, does it?

21      A.   Oh, no, sir, it doesn't.  I think -- I think

22  Counsel mentioned that point.

23      Q.   Okay.  So for both the '625 patent and the

24  '435 patent that you are now calling coordination

25  patents, that term doesn't appear in either one of those
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 1  claims, right?

 2      A.   No, sir, it doesn't.

 3      Q.   Did you use that term in your report?

 4      A.   Not to the best of my recollection.

 5      Q.   You wrote a report of how many thousand pages,

 6  Dr. Nettles?

 7      A.   Roughly, 5,000.

 8      Q.   And in the 5,000 pages of your report that

 9  covers the '625 patent and the '435 patent, you never

10  used the word coordination patent until we got in court

11  today, right?

12      A.   Yes, sir, that's correct.

13      Q.   Now, the '625, that's the patent that I've

14  called the command patent, right?

15      A.   I don't remember what you called it, but

16  that's a fair thing to call it.

17      Q.   Because that's the term that's actually in the

18  claim, not coordination, right, sir?

19      A.   Oh, yes, sir.

20           MR. VAN NEST:  You know what?  I'm going

21  to take this other one down.  Excuse me.

22      Q.   (By Mr. Van Nest) This is the '625 patent,

23  correct?

24      A.   Yes, sir, it is.

25      Q.   Should I turn that -- are you having trouble

1  seeing that?

2        A.    No.  I have a copy here.  I just wanted to

3  look at it to make sure I could see for sure it was the

4  correct patent.

5        Q.    And, again, as you said, the word coordination

6  doesn't appear in the claim.

7        A.    That's correct.

8        Q.    And it appears nowhere in your report.

9        A.    To the best of my recollection, yes, sir.

10       Q.    Now, this is also an ARQ patent.

11       A.    Yes.

12       Q.    Related to ARQ.

13             And you can see that, because in the preamble

14  up on top, it talks about doing something:  Discarding

15  packets and data network, including an automatic repeat

16  request scheme.

17             That is ARQ, right?

18       A.    Yes, sir, that's correct.

19       Q.    So, again, this patent is a very specific

20  enhancement, as you put it, or improvement, I guess you

21  said, to the existing ARQ protocol.

22       A.    Yes, sir, I think that's fair.

23       Q.    And folks have been using ARQ for a long, long

24  time.

25       A.    Yes, sir.

 1      Q.    And so, again, the task for our jurors is to

 2   determine whether in Defendants' products this element

 3   of commanding a receiver to receive at least one packet

 4   having a sequence number that's not consecutive is

 5   present, correct?

 6      A.    That's part of their task, yes, sir.

 7      Q.    Even if every other element of this patent is

 8   present, if that one is missing in the products, there's

 9   no infringement, right?

10      A.    Yes, sir, I agree with that.

11      Q.    Because as we established earlier, and I think

12   you said this morning, right upfront, each and every

13   element has to be proven, right?

14      A.    Oh, yes, sir, absolutely.

15      Q.    And you and Ericsson bear the burden that have

16   proof, right?

17      A.    Yes, sir, that's correct.

18      Q.    You're the ones that have the obligation to

19   bring the evidence to prove what's in the products,

20   right?

21      A.    Yes, sir.

22      Q.    And if you fail to do that, on this patent or

23   any other, the result is a finding of non-infringement,

24   right?

25      A.    Yes, sir.

52

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 1      Q.    Now, you have already changed your opinion

 2 once about what in Defendants' products constitutes a

 3 command to receive, right?

 4      A.    No, sir, I can't agree with that.

 5      Q.    Well, you did a lengthy analysis reflected in

 6 those 5,000 pages of all the patents, right?

 7      A.    Yes, sir.

 8      Q.    And all the products.

 9      A.    Yes, sir.

10      Q.    And then you wrote a report.

11      A.    Yes, sir.

12      Q.    That report was comprehensive from your

13 standpoint, right?

14      A.    Yes, sir.

15      Q.    All your reasoning, all your conclusions, all

16 your logic, right?  That was all supposed to go into the

17 report, right?

18      A.    Yes, sir.

19      Q.    And in order to do that, you looked at the

20 standard, you said.

21      A.    Yes, sir.

22      Q.    You looked at source code, you said.

23      A.    Yes, sir.

24      Q.    You looked at product information, you said.

25      A.    Yes, sir.
```

 1       Q.   And you did some testing, correct?

 2       A.   Yes, sir.

 3       Q.   And what you originally identified in your

 4  report as the command to receive was an aggregated

 5  packet and a block acknowledgement request, right?   Two

 6  things.

 7       A.   The block acknowledgement request is the next

 8  part.

 9       Q.   You identified a block acknowledgement request

10  as something that commands the receiver to receive a

11  packet, right?

12       A.   I'll take your word for it.

13       Q.   Well, no, don't take -- again, I don't want to

14  put you in that position.

15            MR. VAN NEST:  Let's put the report up.

16  It's DX 499.1, Paragraph 88.

17       Q.   (By Mr. Van Nest) This paragraph talks about a

18  command to receive and release expectations, correct?

19       A.   Yes, sir.  And what I was saying before is

20  that the block acknowledgement request is part of the

21  releasing expectations.

22            MR. VAN NEST:  Let's highlight the last

23  sentence of the paragraph.

24       Q.   (By Mr. Van Nest) What you said in your report

25  was:  Both of these types of commands contain a starting

54

1   sequence number which commands the receiver to receive a

2   packet, correct?

3        A.   Yes, sir, that's what it says.

4        Q.   And then following the publication of this

5   report, you changed your opinion and testified under

6   oath that a block acknowledgement request was not

7   sufficient to establish or qualify as a command to

8   receive, correct?

9        A.   Yes, sir, I believe that's correct.

10       Q.   So within a month or two of publishing this

11  report in a deposition, which we requested, you said

12  under oath, a BAR, that thing I identified, the block

13  acknowledgement request, is not sufficient to constitute

14  a command to receive, correct?

15       A.   I believe that's correct.

16       Q.   And today, now that we're in court, you also

17  have abandoned any idea that a block acknowledgement

18  request can constitute a command to receive data packets

19  out of order, correct?

20       A.   An explicit block acknowledgement -- excuse

21  me -- an explicit block acknowledgement request, yes,

22  sir, that's correct.

23       Q.   You're relying on something called an A-MPDU

24  to meet this requirement, right?

25       A.   Yes, sir.

55

 1      Q.    An A-MPDU, that is an aggregated packet,

 2  right?

 3      A.    Yes, sir.

 4      Q.    That's what you're relying on now to

 5  constitute this command to receive, right?

 6      A.    Yes, sir.

 7      Q.    Now, I apologize.  I showed this to our jury

 8  in the opening.  And I know you weren't here, but you

 9  read the transcript.  Did you get a copy of the slides,

10  too?

11      A.    I did.

12      Q.    Good.  So you saw the whole thing, right?

13      A.    Yes, sir.

14      Q.    So I have a transmitter here, and I have a

15  receiver here; fair enough?

16      A.    Fair enough.

17      Q.    And I have packets here on the left in front

18  of the transmitter, and I have packets proceeding over

19  to the receiver, correct?

20      A.    Yes, sir.

21      Q.    Now, an aggregated packet, an A-MPDU, that's

22  just a group of packets, as you've been saying all day,

23  right?

24      A.    Yes, sir.

25      Q.    And this group is a representation of that;

56

 1  fair enough?

 2      A.   That's fair.

 3      Q.   So it's a group of packets, and the purpose of

 4  it is to get data from the transmitter to the receiver,

 5  right?

 6      A.   Yes, sir.

 7      Q.   And in a system where you're using aggregated

 8  packets, groups, that's the only way to get the data

 9  over there, right?

10      A.   Well, you could send just a single packet, but

11  yes, sir.

12      Q.   Well, let me back up, Dr. Nettles.

13           What I said was, when you're using frame

14  aggregation, the whole idea is to move faster, right?

15      A.   Yes, sir.

16      Q.   And you move faster by putting the blocks

17  together.

18      A.   Yes.

19      Q.   And when the blocks are together, the system

20  goes faster because you're sending four at a time, not

21  one at a time, right?

22      A.   Oh, absolutely.

23      Q.   And so what you're now telling the jury is, a

24  command to receive is a standard, routine set of

25  aggregated packets that take data from the transmitter

 1  to the receiver, right?

 2       A.   Yes, sir.

 3       Q.   So in your world, every single packet that

 4  carries data is a command, right?

 5       A.   Yes, sir.

 6       Q.   Now, in the old days, in the old days -- let's

 7  go back to the 1990s.  They teach the 1960s now in

 8  college, which is shocking to many of us, but I just

 9  want to go back to the '90s.

10            In the '90s, the receivers that existed in

11  these systems had some severe limitations on what kind

12  of packets they could receive, right?

13       A.   I -- I don't really know what you're referring

14  to right now.

15       Q.   Well, I'm going to refer to your report in a

16  minute, but let me ask you first, the -- the ARQ systems

17  that existed in the '90s, they rejected packets that

18  were either out of order or outside the window you

19  talked about this morning, correct?

20       A.   They didn't reject packets that were out of

21  order, but they did reject packets that were outside of

22  the window.

23       Q.   Okay.  And you talk about that some -- in your

24  report, that the older ARQ systems rejected packets that

25  were outside the window.

 1        A.    Oh, yes, sir, I did talk about that.

 2        Q.    Right.  And in some cases, that can cause a

 3   problem like deadlock if packets are discarded by the

 4   transmitter and the receiver can't take packets outside

 5   the window, right?

 6        A.    Potentially.

 7        Q.    And one of the patents that you're calling the

 8   coordination patent, the '435, it actually talks about

 9   deadlock --

10        A.    Yes, sir.

11        Q.    -- right?

12              That's one of the problems the inventors of

13   the '625 and the '435 were trying to solve --

14        A.    Yes, sir.

15        Q.    -- right?

16        A.    I agree.

17        Q.    Deadlock.

18              And deadlock occurs as a result of these

19   limitations that the receiver has on what packets it can

20   receive, right?

21        A.    That could be one reason, yes, sir.

22        Q.    And in the patent, one purpose of this command

23   to receive is to force, to force the receiver to take

24   the packet, even if it's outside the window, right?

25        A.    Yes, sir.  In the embodiment in the packet

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1  (sic), that's correct.

2      Q.   Right.  And --

3      A.   Patent.

4      Q.   Now, let's clarify that, too, because we kind

5  of slipped.

6           You said embodiment.  That's an example --

7      A.   Yes, sir.

8      Q.   -- right?

9           And -- and there is an example of the

10  invention in the patent --

11      A.   On, yes, sir.

12      Q.   -- which you called an embodiment, right?

13      A.   That's what it's called, yes, sir.

14      Q.   That's what it's called.  I just want our

15  jurors to follow that.  Embodiment means example.

16  And actually, in the '625, there's only one example,

17  right?

18      A.   Yes, sir.

19      Q.   And that example carries with it something

20  called an enforcement bit, right?

21      A.   Yes, sir, it does.

22      Q.   It actually shows a separate bit that's the

23  enforcer that forces the receiver to take packets it

24  wouldn't otherwise take, right?

25      A.   Yes, sir, that's correct.

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 1                    MR. VAN NEST:  Could I have Figure 5 from

 2   the patent, please, since we're on this?

 3        Q.   (By Mr. Van Nest) Now, this is a figure from

 4   the patent, the '625, Dr. Nettles?

 5        A.   Yes, sir, it is.

 6        Q.   Okay.  And you're familiar with it --

 7        A.   I am.

 8        Q.   -- obviously.

 9             And what it depicts is a standard, ordinary,

10   vanilla data packet, right?

11        A.   Yes, sir.

12        Q.   So we have there --

13                    MR. VAN NEST:  Jeff, could we show --

14        Q.   (By Mr. Van Nest) We have an ARQ header.

15   That's the header you were talking about this morning,

16   right?

17        A.   Yes, sir, that's correct.

18        Q.   And then to the right of that, we have the

19   payload.  That's where the data is.  That's the payload,

20   right?

21        A.   Yes, sir, that's correct.

22        Q.   And then we have something called a sequence

23   number, right?

24        A.   Right.

25        Q.   A k bit sequence number.
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1              Now, that is described as prior art.

2                   MR. VAN NEST:  Can you highlight that

3  under Figure 5, please?

4       Q.   (By Mr. Van Nest) Prior art, right?

5       A.   Oh, yes, sir.

6       Q.   Now, prior art means it's out there before the

7  invention --

8       A.   Yes, sir, that's what it means.

9       Q.   -- right?

10             The inventor can't invent the prior art; the

11  prior art was there before the invention.

12      A.   Yes, sir, that's correct.

13      Q.   So what this is telling anybody who reads the

14  patent, an engineer, an expert, a member of the IEEE, a

15  member of ETSI, any one of these folks, that a common

16  standard data packet, that is in the prior art and you

17  can use it, right?

18      A.   Yes, sir.

19      Q.   Now, the only difference between this packet

20  and those packets is there's a group of them, right?

21      A.   No, sir, I can't agree with that.

22      Q.   These packets don't have any enforcement bit?

23      A.   That's right.

24      Q.   They have a sequence number, right?

25      A.   Yes, sir.
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 1       Q.    They have a header, right?

 2       A.    Yes, sir.

 3       Q.    They have a payload, right?

 4       A.    Yes, sir.

 5       Q.    And they are, in a modern system, the only way

 6  to transmit data in a group form from the transmitter to

 7  the receiver, right?

 8       A.    In 802.11, that's correct.

 9             MR. VAN NEST:  Now let's go to Figure 8

10  of the patent and highlight that.

11       Q.    (By Mr. Van Nest) Now, this is -- this is what

12  the inventors describe as an example of how to practice

13  their invention, right?

14       A.    Yes, sir, it is.

15             MR. VAN NEST:  And could we highlight

16  that RPEB?

17       Q.    (By Mr. Van Nest) Now, the stuff that I didn't

18  highlight, that's not new, right?  That's just like what

19  was in Figure 5.

20       A.    Yes, sir, I agree with that.

21       Q.    So you have an ARQ header and a payload and a

22  sequence number.  That's just a plain vanilla data

23  packet that goes back for years, right?

24       A.    Yes, sir.

25       Q.    Now, what the inventors gave as the only
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1  example in their patent of this command invention was a

2  packet with what's called a PDU enforcement bit, right?

3       A.   Yes, sir, that's correct.

4       Q.   And you can see it there, RPEB.   That stands

5  for receive PDU enforcement bit, right?

6       A.   Yes, sir, that's correct.

7       Q.   That forces the receiver to take a packet that

8  it wouldn't otherwise take.   That's the point of it.

9       A.   Oh, yes, sir, absolutely.

10       Q.   And I think we had some testimony from

11  Mr. Larsson on that.

12                 MR. VAN NEST:   Do we have a board that

13  shows Mr. Larsson's testimony on the forcing a receiver?

14                 No.   Let's take that one down.   That's

15  not quite what I -- what I had in mind, but...

16       Q.   (By Mr. Van Nest) Okay.   Do you recall

17  Mr. Larsson yesterday testifying on the video that his

18  invention involved forcing a receiver to take bits, take

19  packets?

20       A.   I'm sorry.   I don't remember the video that

21  well.

22       Q.   Fair.   We saw a lot of video, and we heard a

23  lot of testimony, so I can't fault you for that.

24                 Now, wouldn't you agree with me, Dr. Nettles,

25  that if a receiver could receive a packet any way, out

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1  of order, or outside its window, you wouldn't need a

2  command to force it to do so, right?

3      A.   No, sir.  The command would be built into the

4  packet.

5      Q.   I don't think you heard my question correctly,

6  Dr. Nettles.  I just want to be sure.

7           If your receiver was set up so that it could

8  take packets in any order, inside or outside its window,

9  that kind of receiver wouldn't need a command to force

10 it to take the packet, would it?

11     A.   Well, it wouldn't need one of these

12 enforcement bits, no, sir.

13     Q.   Again, that wasn't my question either.

14          If a receiver, by its very rules, was set up

15 so that it was required to take any packet in any order

16 inside or outside its window, you wouldn't need a

17 command to force it to do that.  Right?

18     A.   No, sir.  I really can't agree with you about

19 that.

20               MR. VAN NEST:  Let's play from

21 Dr. Nettles' deposition from Page 104, Lines 14 through

22 23.

23               (Video playing.)

24               QUESTION:  If a receiver could receive a

25 packet that a transmitter was sending to it, is it

 1  correct that you would not need the command to receive

 2  in the '625 patent to command or force the receiver to

 3  receive that packet?

 4              ANSWER:  I mean, that almost seems like a

 5  tautology.  If it could receive it, then would you need

 6  to insist that it receives it?  No, because it could

 7  already receive it.

 8              (End of video clip.)

 9      Q.   (By Mr. Van Nest) Do you stand by that

10  testimony, Dr. Nettles?

11      A.   Absolutely.

12      Q.   Okay.  And you know, as well, that the

13  inventor of the '625, the one we saw on video yesterday,

14  Mikael Larsson, agrees that if the receiver can take the

15  packet anyway, you don't need a command, right?

16      A.   Again, I don't really remember exactly what

17  the --

18              MR. VAN NEST:  Let's put --

19      A.   -- what he said.

20              MR. VAN NEST:  -- put Mr. Larsson's

21  testimony up that we just looked at a minute ago.

22      Q.   (By Mr. Van Nest) So looking at Figure 2

23  again, if you had a system that was designed where you

24  could receive a packet, let's say Sequence No. 7, beyond

25  TSN Max, and shift the window automatically with just a

 1  regular packet, you wouldn't need the command you're

 2  talking about in Claim 1, correct?

 3           Yes.  If you had that, then you wouldn't need

 4  it.

 5           That's what he said.  Do you agree with that?

 6      A.   I agree that that's what he said, yes.

 7      Q.   Okay.  And you also said that if a receiver

 8  could already receive a packet, you wouldn't need a

 9  command to receive it, right?

10      A.   Yes, sir.

11      Q.   And you said that repeatedly in your

12  deposition.  Not just once, but a number of times,

13  right?

14      A.   I'll take your word about the repeatedly.

15      Q.   You want to see --

16           MR. VAN NEST:  Let's show one more --

17      A.   Okay.

18           MR. VAN NEST:  -- from his deposition

19  transcript at Page 103, Line 24.

20           (Video playing.)

21           QUESTION:  Now, if the -- if the receiver

22  could already receive a packet, why would you need a

23  command to force the receiver to receive that packet?

24           ANSWER:  Well, you might not need that

25  command, but you might need the rest of the patent.

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1              (End of video clip.)

2        Q.    (By Mr. Van Nest) Now, Dr. Nettles, we're here

3   talking about, of course, 802.11n receivers, correct?

4        A.    Yes, we are.

5        Q.    And those are the receivers that are found in

6   the Defendants' products, the ones that you examined and

7   the ones that you're accusing of infringement, right?

8        A.    Yes, sir, that's correct.

9        Q.    And you know that under the rules that have

10  been established for those receivers, they can take a

11  packet within their window in any order whatsoever,

12  right?

13       A.    Yes, sir, they can.

14       Q.    So, with respect to packets that are sent

15  within the window, it doesn't matter whether they come

16  5, 6, 7, 8; 6, 5, 7, 8; 8, 7, 6, the receiver will take

17  them whatever order they come in, right?

18       A.    Yes, sir, that's correct.

19       Q.    And that's the rule that the receiver in an

20  802.11 device has to follow, correct?

21       A.    Yes, sir.

22       Q.    And it is also the case that in an 802.11n

23  receiver, if the packets that come are outside the

24  window, the receiver is required to move the window to

25  accept it, right?

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 1        A.    Oh, yes, sir.

 2        Q.    That's automatically done, correct?

 3        A.    Oh, yes, sir.

 4        Q.    The rules require that if the window is

 5  expecting packets 5, 6, 7, 8, and it gets packets 7, 8,

 6  9, and 10, it automatically moves and it receives those

 7  packets, right?

 8        A.    Oh, yes, sir, absolutely.

 9        Q.    Would you agree with the statement that a

10  receiver in an 802.11 device is always ready to go?

11        A.    Yes.  Yes, sir.

12        Q.    Okay.  And that's because it's got the green

13  light to take packets in any order inside or outside the

14  window, right?

15        A.    Yes, sir, that's correct.

16        Q.    Now, did you learn or have you learned --

17              MR. VAN NEST:  I'll withdraw that

18  question.  Excuse me.

19        Q.    (By Mr. Van Nest) I know you've looked at a

20  lot of deposition testimony, and you've looked at a lot

21  of documents and so on in your analysis, but did you

22  become aware in your review that even the inventors of

23  the '625 patent in Ericsson concluded it was too

24  complicated, too complex, and too time-consuming to

25  actually use in a product.
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 1        A.   I think what I recall is that they did not use

 2   it in a product, but I don't remember exactly that

 3   conclusion.

 4        Q.   Well, let's start there.

 5             So -- so you know, at least, that with respect

 6   to this command patent, Ericsson and the inventors and

 7   the engineers decided not to use it in a product, right?

 8        A.   Yes, sir, I do.

 9        Q.   And as far as you know -- and I'll accept your

10   claim that the --

11                  MR. VAN NEST:  Withdraw that.

12        Q.   (By Mr. Van Nest) As far as you know, Ericsson

13   has never used it in a product, correct?

14        A.   Yes, sir, that's correct.

15        Q.   And the reason the Ericsson engineers didn't

16   use it in a product was that they concluded, after

17   testing it, that it was too complex, too complicated,

18   and too time-consuming for a product that they wanted

19   consumers to buy, right?

20        A.   No, sir, I can't agree with that.

21        Q.   Well, let's put up --

22                  MR. VAN NEST:  Could we put up the

23   portion of the transcript from Mr. Larsson, Peter

24   Larsson?

25        Q.   (By Mr. Van Nest) Now, you know who Peter
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 1  Larsson is, right?

 2       A.   Yes, sir.

 3       Q.   He's one of the inventors of the '625, right?

 4       A.   Yes, sir.

 5       Q.   He works at Ericsson.

 6       A.   Yes, sir.

 7       Q.   He works at Ericsson today.

 8       A.   I think that's correct, yes, sir.

 9       Q.   Have you ever met him?

10       A.   No, sir.

11       Q.   He's not here in Texas, is he?

12       A.   Not to the best of my knowledge.

13       Q.   Okay.  And what he concluded was:  The project

14  leader at the wireless ATM research project believed

15  that the idea of sending a command to receive and

16  release expectations was too complicated, too complex,

17  and too time-consuming?

18            Yes.

19            Does that -- is that consistent with what you

20  know about the background of the efforts to actually use

21  this patent?

22       A.   Yes, sir, it's consistent.

23       Q.   Okay.  And in any future prototyping that

24  Ericsson did, they decided:  Get rid of this thing.  We

25  don't want a command to receive or to command.  It's too
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 1  darn complicated to ever work in a product, right?

 2       A.   I don't know exactly what they concluded, but

 3  I'll take your word.

 4       Q.   All right.  Let's talk about the '435 patent.

 5  The good news is, we've only got two to go.  We've only

 6  got two to go.

 7            I know this is dense, and so we'll pause for

 8  just a minute.  This is the other half of the

 9  coordination patent that you talked about this morning,

10  right?

11       A.   Yes, sir, it is.

12       Q.   This is also a patent which, although you're

13  calling it coordination, we don't see that word anywhere

14  in the claim, right?

15       A.   That's correct.

16       Q.   Anywhere in your 5,000-page report, that word

17  doesn't appear.

18       A.   Yes, sir, that's correct.

19       Q.   Do you know if it appears anywhere in the

20  patent?

21       A.   I don't know that.

22       Q.   Okay.  Certainly, if it does, none of us

23  remember, right?

24       A.   Yes, sir.

25       Q.   Now, the problem that the inventors of this

1  patent were trying to solve was deadlock, right?

2       A.    Yes, sir.

3       Q.    Deadlock is something that existed in a time

4  when the receiver couldn't accept the packet out of its

5  window, right?

6       A.    Yes, sir.

7       Q.    And in 802.11n receivers are not subject to

8  deadlock because, as we've established, they have the

9  green light; they're ready to go; they can take whatever

10 packet comes, right?

11      A.    In part, yes, sir.

12      Q.    So this patent came into existence to solve a

13 problem that no longer exists in the receivers that the

14 Defendants build and sell, right?

15      A.    No, sir, I can't agree with that.

16      Q.    Now, I think we've established that an 802.11

17 receiver can take packets inside its window in any

18 order, right?

19      A.    Yes, sir, absolutely.

20      Q.    And when it gets packets outside its window,

21 it automatically moves on, right?

22      A.    Yes, sir, that's correct.

23      Q.    It automatically takes those packets and keeps

24 on rolling so the system won't slow down or stop, right?

25      A.    Yes, sir.

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 1        Q.    That's the routine; normal, day-in/day-out

 2   operation of these receivers, right?

 3        A.    Yes, sir.  That's what we showed.

 4        Q.    And that computation --

 5              MR. VAN NEST:  Strike that.

 6        Q.    (By Mr. Van Nest) The element that we are

 7   disputing -- let's back up just a minute.  I'm getting

 8   ahead of myself.

 9              The limitation that we are debating on the

10   '435 patent in this trial is the one that requires the

11   receiver to do a computation, correct?

12        A.    I'll -- I don't know what you're disputing,

13   but I assume, since you're telling me that, that's

14   correct.

15        Q.    I thought you read the opening statement.

16        A.    Well, I didn't know -- I didn't --

17        Q.    That's all right.  Let me --

18        A.    I didn't -- I didn't know that that was meant

19   to completely limit you, but, okay, that's fine.  I

20   accept that.

21        Q.    This is complicated enough.

22        A.    Okay.

23        Q.    You want more?

24        A.    Fair enough.

25        Q.    You want more?  No.  We're going to stay with
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1  this one.

2      A.    Okay.

3      Q.    This is what I -- this is what I talked to the

4  jurors about in the opening, and I'm proud to stay with

5  it.

6            So one of the requirements of the '435 is that

7  you send a discard notice over to the receiver, right?

8      A.    Yes, sir.

9      Q.    And the thing that you're relying on is that

10  the discard notice is just an ordinary, good

11  old-fashioned, everyday set of facts, right?

12      A.    One of them, yes, sir.

13      Q.    Okay.  Then the receiver has to commute --

14  excuse me -- compute which data packets have been

15  discarded by the transmitter, correct?

16      A.    Yes, sir.

17      Q.    So the idea here is, the computation that the

18  receiver has to make is a computation of which packets

19  on the transmitter side have been discarded by the

20  transmitter, right?

21      A.    Yes, sir.

22      Q.    And it's clear as a bell in your testimony and

23  in the claim and in the claim language that it's

24  computing which of these packets have been discarded.

25            That's what's required, right?

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 1        A.   Yes, sir, I agree with that.

 2        Q.   Now, I think we established a minute ago that

 3   when the receiver receives packets that are outside the

 4   window, it automatically moves on anyway, right?

 5        A.   Yes, sir, that's correct.

 6        Q.   That so-called calculation that you showed us

 7   this morning and went through it, that is simply the

 8   basis upon which the window moves automatically when it

 9   gets a regular group of aggregated packets, right?

10        A.   Yes, sir, that's correct.

11        Q.   There's nothing special about that, is there?

12        A.   Nothing special, no, sir.

13        Q.   Again, your claim is that every single

14   ordinary vanilla packet that moves from one side to the

15   other is somehow a discard notice and forcing a

16   computation, right?

17        A.   Yes, sir, it is.

18        Q.   Even though, in an 802.11n receiver, it is set

19   up under the rules to move on no matter what kind of

20   packets and in what order it gets, right?

21        A.   Yes, sir, that's correct.

22        Q.   And I guess with respect to the '435, the same

23   rule is true:  If Claim 1 is not infringed,

24   automatically Claim 2 is not infringed either, correct?

25        A.   Yes, sir, that's correct.
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1       Q.    All right.  Let's talk about the '223, which

2    is behind Tab 5.  It's the last -- it's the last patent

3    we're going to discuss.

4                    MR. VAN NEST:  And actually, let's put it

5    up for just a moment.

6       Q.    (By Mr. Van Nest) Now, the '223 patent --

7    well, let me back up.

8            On each of the patents that we've been talking

9    about up until now, the '625, the '435, the '215, and

10   the '568, your opinion as to Intel chips is the same as

11   it is for Broadcom chips and Atheros chips and Realtek

12   chips and everybody's chips, right?

13      A.    Yes, sir.

14      Q.    So with respect to those four patents, your,

15   quote, read, your opinion -- put it that way -- your

16   opinion on infringement doesn't vary from one product to

17   another, right?

18      A.    That's correct.

19      Q.    This patent is different, right?

20      A.    Yes, sir.

21      Q.    On this particular patent, your opinion is

22   that Intel chips infringe; but Broadcom chips, Atheros

23   chips, Realtek chips, Ralink chips, they don't infringe

24   this patent, right?

25      A.    That's correct.

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 1        Q.    So as you said, this patent can't possibly be

 2   standards essential because 90 percent of the market is

 3   selling 802.11n devices without using this patent,

 4   right?

 5        A.    No, sir, I can't agree with that.

 6        Q.    I think you said this morning that '223 is not

 7   a standard essential patent, right?

 8        A.    No, sir.  I think I said it was standard

 9   essential.

10        Q.    Well, let me put it this way:  There are --

11   approximately 90 percent of the devices accused in this

12   case do not infringe this patent, according to you,

13   right?

14        A.    Yes, sir, I agree with that.

15        Q.    Okay.  This one is different from the others.

16              Now, you called this the timing patent, I

17   believe, right?

18        A.    Yes, sir.

19        Q.    There's also a second key requirement, which

20   is to segment the service data unit into at least one

21   protocol data unit, correct?

22        A.    Yes, sir, that's correct.

23        Q.    So there's a segmenting requirement that must

24   be satisfied in order to establish infringement of the

25   '223, right?
```

1      A.   Yes, sir.

2      Q.   The device must have the capability to do that

3  segmenting in order to infringe this patent, correct?

4      A.   Yes, sir.

5      Q.   Now, would you agree with me that segmenting

6  and fragmenting are related concepts?

7      A.   Yes, sir, they're related.

8      Q.   And they're related in that they both

9  generally talk about breaking things into pieces and

10 then reassembling them, right?

11     A.   Generally, that's true, yes, sir.

12     Q.   So if we were talking generally about

13 segmenting and fragmenting, what we would be talking

14 about, for example, is taking a packet and breaking it

15 up into pieces and reassembling them, right?

16     A.   Yes, sir, that's correct.

17     Q.   And fragmenting is actually prohibited for an

18 802.11 device, correct?

19     A.   No, sir, I can't agree with that.

20          MR. VAN NEST:  Can we put up from

21 PX 286 -- that's the standard itself -- Section 9.1.5,

22 please?

23     Q.   (By Mr. Van Nest) Are you familiar with the

24 fragmenting provisions of the standard, Dr. Nettles?

25     A.   Yes, sir, I am.

 1              For some reason, my screen has a main menu and

 2   pointers, and it's obscuring this -- this display.

 3                   MR. STEVENSON:  May I approach and see

 4   if --

 5                   THE COURT:  Yes, you may.

 6                   THE WITNESS:  I haven't even touched it,

 7   so I don't know what to do to get it off.

 8                   MR. VAN NEST:  We're not blaming you.

 9   Jeff can probably --

10                   THE WITNESS:  Great.  Thank you.  Sorry

11   about that.

12       Q.   (By Mr. Van Nest) Not your fault.  Don't

13   apologize.

14              This is an -- actually an excerpt from the

15   standard, right?

16       A.   Yes, sir, it is.

17       Q.   And what it says is an MSDU -- that's a

18   packet?

19       A.   Yes, sir.

20       Q.   -- transmitted under various agreements --

21   that means BlockAck, means we're going to transmit it in

22   an aggregated form, right?

23       A.   Yes, sir.

24       Q.   So like our aggregated packets or groups of

25   packets -- shall not be fragmented even if its length

80

 1   exceeds dot 11 fragmentation threshold, correct?

 2        A.   Yes, sir.

 3        Q.   Then it goes on to say:  An MSDU -- that's a

 4   packet -- within an A-MPDU -- that's an aggregated

 5   packet, a group, right?

 6        A.   Yes, sir.

 7        Q.   -- that shall not be fragmented even if its

 8   length exceeds a threshold, correct?

 9        A.   Oh, yes, sir.

10        Q.   And it goes on to say:  MMPDUs and MSDUs, they

11   shouldn't be fragmented either, correct?

12        A.   Yes, sir, that's correct.

13        Q.   Now, you are relying for your infringement

14   opinion on something other than fragmentation or

15   segmentation in the Defendants' devices, right?

16        A.   No, sir, I can't agree with that.

17        Q.   You have identified something called

18   encapsulation as the way in which the Intel chips,

19   because that's what we're limited to here, do to

20   infringe, right?

21        A.   Oh, yes, sir.

22        Q.   So encapsulation is what you say meets this

23   segmentation requirement of Claim 11, right?

24        A.   Yes, sir, absolutely.

25        Q.   Now, encapsulation involves putting a package

81

1  around a packet, right?

2      A.   Yes, sir, it does.

3           MR. VAN NEST:  So can I have the next

4  image, please?  It's of the packet.  The baseball player

5  on the left and another one on the right.

6      Q.   (By Mr. Van Nest) And would you agree with me,

7  just from a -- from a basic standpoint, this is one way

8  to show segmenting?  Not the only way, but a way to show

9  segmenting, right?

10     A.   Yes, sir, I would agree.

11     Q.   I've taken the packet on the left, and I have

12  broken it into smaller pieces, and then it's going to be

13  reassembled, right?

14     A.   Eventually, yes, sir.

15     Q.   Yeah.

16          MR. VAN NEST:  Let's look at the next

17  slide.

18     Q.   (By Mr. Van Nest) Now, this is encapsulation

19  where you take the image on the left, the packet, for

20  example, a video of a baseball player from the Rangers,

21  and you encapsulate it; you put a header and other

22  material around it, right?

23     A.   Yes, sir.

24     Q.   And according to you, this process, which

25  produces this image, that's what you say is

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1  segmentation, right, Dr. Nettles?

2       A.   That's completely correct, yes, sir.

3       Q.   Now, there's a second requirement of the '223,

4  which is related to the checkout counter, right?

5       A.   Yes, sir.

6       Q.   That's the timer that you spoke about earlier

7  today?

8       A.   Yes, sir.

9       Q.   And I think I heard you correctly when you

10  said the key to the timer is when you start it, right?

11       A.   That's part of the key, yes, sir.

12       Q.   But, obviously, Ericsson didn't invent timers

13  in transmitters and receivers, right?

14       A.   Oh, no, sir.

15       Q.   Those have been around a long time.

16       A.   Oh, yes, sir.

17       Q.   And they've had varied uses.

18       A.   Absolutely.

19       Q.   And they've been involved in all sorts of

20  areas, different types of transmission and reception.

21  Timers on transmitters, timers on receivers, that's been

22  around a long time, right?

23       A.   I agree completely.

24       Q.   The absolute key to this thing, according to

25  you and Ericsson, is where you start the timer to run,

 1  right?

 2      A.    Yes, sir.

 3      Q.    And the patent tells us when that is, and that

 4  is when said service data unit is received by said data

 5  link layer, right?

 6      A.    Yes, sir, that's correct.

 7      Q.    And you need to identify in Defendants'

 8  devices -- in this case, it's Intel's chips -- a timer

 9  that starts when a packet is received by said data link

10  layer, right?

11      A.    Yes, sir, you do.

12      Q.    If the timer starts later than that, there's

13  no infringement, right?

14      A.    Yes, sir.

15      Q.    That's what you've said, and you'll stand by

16  it?

17      A.    Yes, sir.

18      Q.    Now, we saw a chart this morning with the

19  layers of processing, the sort of stairs, right?

20      A.    Yes, sir.

21      Q.    And you took that from a Microsoft document

22  that's available to any of us on the Internet, correct?

23      A.    I don't know exactly where that picture comes

24  from.  It was a -- it's a standard layer picture.

25      Q.    And, actually, you have a standard layer

1  picture in your report, I believe, correct?

2      A.   Yes, sir.

3      Q.   But the layer picture in your report is

4  different than the one you showed us this morning; isn't

5  that right?

6      A.   Probably, yes, sir.

7           MR. VAN NEST:  Now, let's -- let's put

8  up -- let's put up Page 21 from Exhibit 499.5 from

9  Dr. Nettles' report.  And can we make that thing bigger?

10          Okay.  Can't walk around because it's

11  right here.

12     Q.   (By Mr. Van Nest) Now, the data link layer is

13  the layer labeled on this image, correct?

14     A.   Yes, sir, that's correct.

15     Q.   And in order for a device to infringe this

16  claim of this patent, the timer has to start when the

17  data, which is moving from the top to the bottom,

18  arrives at the data link layer, right?

19     A.   Yes, sir.

20     Q.   And the data link layer is made up of two

21  separate sublayers, right?

22     A.   In this picture, yes, sir.

23     Q.   There's something called a logical link layer,

24  right?

25     A.   In this picture, yes, sir.

 1      Q.   And below that, there's a MAC layer, correct?

 2      A.   Yes, sir.

 3      Q.   So when a packet comes into the stack and into

 4  the data link, the first thing it encounters is the

 5  logical link control layer, correct?

 6      A.   In this picture, yes, sir.

 7      Q.   Well, and you've testified that when packets

 8  are handed from the network layer to the layer below,

 9  the first thing they encounter is the logical link,

10  haven't you?

11      A.   If that layer exists, yes, sir.

12           MR. VAN NEST:  Let's actually -- could we

13  play from Dr. Nettles' deposition at Page 468, Line 6

14  through 10?

15           (Video playing.)

16           QUESTION:  When 802.11 packets are handed

17  from the network layer to the data link layer, the first

18  thing that they encounter is the logical link layer; is

19  that correct?

20           ANSWER:  Right.

21           (End of video clip.)

22      Q.   (By Mr. Van Nest) And then --

23           MR. VAN NEST:  Let's put the image back

24  up.

25      Q.   (By Mr. Van Nest) After the packets arrive at

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1   that logical link layer, after that, they go into the

2   MAC layer, right?

3        A.   Yes, sir.  That's what's shown here.

4        Q.   And that's what you testified to repeatedly in

5   your deposition, right?

6        A.   With respect to this picture, yes, sir.

7        Q.   Now, as a matter of fact, the timer that you

8   are relying on to establish infringement in the -- by

9   the Intel chips of this claim is in the MAC layer,

10  right?

11       A.   Yes, sir.  It's in what Intel describes as the

12  MAC layer, that's correct.

13       Q.   So it's in the MAC layer, not in the logical

14  link layer, correct?

15       A.   That's correct.

16       Q.   And would you agree with me that whatever you

17  want to call it, a logical link layer or whatever you

18  want to call it, if there's some processing of that data

19  after it arrives at the data link layer and before the

20  timer starts, there's no infringement of Claim 11,

21  right?

22       A.   I think that Claim 11 says:  Received by the

23  data link layer.  But yes, sir, I agree in general.

24       Q.   Okay.  So if the designers at Intel and the

25  product documentation and the source code and all of

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1  that that backs it up establish that the data is

2  processed in this data link layer before the timer goes

3  off, you would tell our jurors there's no infringement,

4  right?

5       A.    If -- if it -- if the claim is not in that, I

6  would agree that there's no infringement, yes, sir.

7       Q.    Now, Dr. Nettles, you have actually not

8  attended ever an IEEE meeting; is that right?

9       A.    No, sir, I have not.

10      Q.    You weren't involved in any of the IEEE

11 working groups?

12      A.    Excuse me.  Let me be clear.  Not an IEEE

13 802.11 standards meeting.

14      Q.    Fair enough.

15            You weren't involved in developing an 802.11

16 standard at any level?

17      A.    No, sir, I was not.

18      Q.    You have not been involved in developing any

19 802.11 end products?

20      A.    No, sir, I have not.

21      Q.    And as of a couple of months ago, you weren't

22 even an IEEE member, right?

23      A.    That's correct.

24      Q.    You joined when?

25      A.    About three weeks ago.

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 1      Q.   And was that in order to tell jurors, as you

 2 did last night quite proudly, I'm an IEEE member?

 3      A.   In part, yes, sir.

 4               MR. VAN NEST:  Pass the witness.

 5               THE COURT:  All right.  Thank you.

 6               All right.  We're going to take our

 7 afternoon break at this time, Ladies and Gentleman of

 8 the jury.  We'll be in recess until 2:30.

 9               Please remember the Court's instructions.

10 Do not discuss this case among yourselves.  We'll see

11 you back here at 2:30.

12               Be in recess.

13               COURT SECURITY OFFICER:  All rise.

14               (Jury out.)

15               (Recess.)

16               COURT SECURITY OFFICER:  All rise for the

17 jury.

18               (Jury in.)

19               THE COURT:  Please be seated.

20               MR. STEVENSON:  May I proceed?

21               THE COURT:  All right.  You may proceed,

22 Mr. Stevenson.

23               MR. STEVENSON:  Thank you, Your Honor.

24                  REDIRECT EXAMINATION

25 BY MR. STEVENSON:
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 1        Q.   Dr. Nettles, over the years during your

 2   career, have you attended IEEE meetings?

 3        A.   Yes, sir, many of them.

 4        Q.   And they have a journal.  Do you read that?

 5        A.   They have lots of journals.  I read it, and

 6   I've actually published papers there.

 7        Q.   And how many years have you been doing that?

 8        A.   Twenty.

 9        Q.   Okay.  Why haven't you joined the IEEE years

10   ago?

11        A.   It's kind of one of those things I never got

12   around to doing.

13        Q.   Okay.  And why did you join recently?

14        A.   Well, I was concerned that people might

15   mistake the fact that I wasn't an IEEE member for not

16   being qualified to testify in this case.

17        Q.   Okay.  Well, do you feel you are qualified to

18   testify?

19        A.   Oh, yes, sir.

20        Q.   And how long have you been teaching this exact

21   material at the university level to graduates and

22   undergraduates?

23        A.   I have been teaching networking and wireless

24   networking almost every semester since 1998.

25        Q.   And have you built some wireless networks of
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 1  your own?

 2       A.   Oh, yes, sir.

 3       Q.   Let's talk now about the '215 patent.  And I

 4  think the issue that was raised by Defendants is -- in

 5  the questioning, that they use in their actual

 6  implementations, one message type, it's the compressed

 7  block acknowledgement or the bitmap.

 8       A.   Yes, sir, that's correct?

 9       Q.   Okay.  So I want to ask you about that.

10            Now, where do the choices reside within the

11  system?

12       A.   Well, they reside within the standard.

13               MR. STEVENSON:  And could we see Slide

14  19, please?

15       Q.   (By Mr. Stevenson)  Okay.  Are these the

16  choices?

17       A.   Yes, sir, in 802.11, these are the choices.

18       Q.   How many choices are there?

19       A.   There are three, plus one that's reserved.

20       Q.   Basic BlockAck, compressed BlockAck, and

21  Multi-TID BlockAck?

22       A.   Yes, sir, exactly.

23       Q.   Now, you got asked some questions and shown

24  some of your deposition.

25       A.   Yes, sir.

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 1        Q.    And I think the -- the tenor of the question

 2   was if all the choices aren't programmed into a

 3   receiver, does that meet the claim?

 4        A.    Yes, sir.

 5        Q.    Let's see what you actually said in your

 6   deposition, because then they played the deposition.

 7        A.    Okay.

 8        Q.    Let's see what you were asked.  The question

 9   was:  To be clear, a system that can only use one

10   message type, it can't choose to use other message

11   types; that is not covered by the claims of the '215

12   patent.

13              Is that correct?

14        A.    Yes, sir, that's the question.

15        Q.    The word there is system in the question.  Do

16   you see that?

17        A.    Oh, yes, sir.

18        Q.    What do you understand by system?

19        A.    Well, system means the actual implementation,

20   the thing that's running and doing 802.11.

21        Q.    The -- the entire system, right?

22        A.    Yes, sir.

23        Q.    And -- and that's the standard basically,

24   isn't it?

25        A.    Ultimately, yes, sir.
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 1      Q.    Okay.   And you answered, you said:   If there's

 2   only one message type, there can't be identifying from a

 3   number of different message types.   But if there's more

 4   than one message type and the system just uses one

 5   consistently, that system can definitely infringe the

 6   patent.

 7      A.    Yes, sir, that's what I said.

 8      Q.    Let me go back to the 802.11 standard.

 9            Does the standard allow systems to have

10   multiple types of responses, multiple message types?

11      A.    Yes, sir, and it has a type identifier so that

12   that's possible.

13      Q.    Okay.   And I want to ask you about that,

14   because that's what I don't really get.

15            If what they're saying is true and they just

16   hardwire until one choice, one bitmap, it's the same

17   thing every time, why do they need a type identifier?

18      A.    Because they have to obey the standard.

19      Q.    But isn't the point of the type identifier to

20   tell the guy receiving the message which of the choices

21   you've decided on?

22      A.    Yes, sir, exactly.

23      Q.    Well, if everybody's got hardwired in one

24   choice and one choice only, what's the point of creating

25   a field and putting a number in there and transmitting

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 1  it in every request packet that ever gets sent if all

 2  it's going to say is just a bitmap?

 3       A.   Well, there might be some other component,

 4  maybe not one of the Defendants, that would transmit a

 5  basic BlockAck or a Multi-TID BlockAck.

 6       Q.   They've got to talk to other people.

 7       A.   Yes, sir.

 8       Q.   So everybody in this courtroom is not the

 9  entirety of everybody who does 802.11n?

10       A.   Oh, no, sir.

11       Q.   What kind of other equipment out -- is out

12  there that does 802.11n?

13       A.   Well, I don't have a complete survey of all

14  the -- of all the vendors, but there are lots --

15       Q.   You gave me -- you gave me an example in your

16  direct of all kinds of different devices that are --

17       A.   Oh, yes, sir, those are just different

18  devices.  So, you know, thermostats, scales you weigh,

19  your cell phone, tablets; lots of different devices.

20       Q.   Okay.  So is this field mandatory, this type

21  of identifier field?

22       A.   Yes, sir, it is.

23       Q.   I mean, do they have to populate it with a

24  number?

25       A.   Absolutely.
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1        Q.    If they don't populate it with a number, what

2    happens?

3        A.    Well, fields don't work that way.  If you --

4    it would collapse basically if you didn't put a number

5    in there.

6        Q.    And then do they have to check it coming in?

7        A.    Yes, sir.

8        Q.    And so if -- if the Defendants have decided,

9    in our particular chips we want to get -- we want to use

10   bitmaps, that's just what we happen to like, and they

11   decide that's what we're going to wire them up for, is

12   bitmaps, first question:  Is that a choice they've made

13   from among the choices in the standard?

14       A.    Yes, sir.

15       Q.    Second question:  Are they constrained by the

16   choices in the standard?  In other words, do they have

17   to choose one of the things on that list?

18       A.    Absolutely.

19       Q.    Three, have they, in fact, chosen one of the

20   things on the list?

21       A.    They have.

22       Q.    Then don't they have to check every single

23   BlockAck frame that comes in for the type identifier?

24       A.    Yes, sir.

25       Q.    Because it's -- if it's not the one that they

1  want to get, they've got to toss it out, don't they?

2      A.   Yes, sir.

3      Q.   Does the system, as implemented by the

4  standard, provide a choice to any manufacturer as to

5  what particular frame variance they want to use?

6      A.   Yes, sir.

7      Q.   And in the future, people decide, for

8  instance, I want to use Multi-TID BlockAck, can they do

9  it?

10      A.   Absolutely.

11      Q.   And what kind of things use Multi-TID

12  BlockAck?

13      A.   That's mostly for a power save mode that's --

14  I think the primary target eventually is mobile phones

15  that are going to use the Internet, rather than using

16  the cell phone system.

17      Q.   So in the future, the standard is evolving and

18  it can cover anything that comes along in terms of

19  additional choices?

20      A.   Yes, sir.  And there's even a place to add a

21  choice, too.

22      Q.   The reserve field?

23      A.   (No response.)

24          Now, let me ask you about the claim.

25          When we went through and talked about this on

 1  your direct, I believe you told me that the way this

 2  claim works is it's a method.  So we have sending,

 3  receiving, then responsive to the receiving step,

 4  constructed a message field for a second data unit,

 5  right?

 6           Now, what we're arguing about here is that

 7  message field, and it has to include first a type

 8  identifier, and then at least one of a sequence number

 9  of length field and content field, right?

10      A.   Yes, sir.

11      Q.   So, in other words, to infringe, they have to

12  have that first type identifier?

13           MR. STEVENSON:  Mr. Diaz, can you please

14  put that slide back up?

15      Q.   (By Mr. Stevenson)  They've got to have that

16  01 in the dark orange as the type identifier, right?

17      A.   Yes, sir, they do.

18      Q.   Then it has to be followed by at least one of

19  sequence, length, content?

20      A.   Yes, sir.

21      Q.   And they get their choice in this claim.  In

22  Claim 1, they get their choice of what they're going to

23  use for that field?

24      A.   That's correct.

25      Q.   Any one of the three infringes?

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 1        A.    Correct.

 2        Q.    Now, let me get to Claim 2.  And Claim 2

 3   changes those choices, doesn't it?

 4        A.    Yes, sir, it does.

 5        Q.    What does it change those choices to require?

 6        A.    That it includes a bitmap.

 7        Q.    For every single trip through method, right?

 8        A.    Oh, yes, sir.

 9        Q.    So if, for instance, they go through this

10   message -- method and it's not a bitmap, they're not

11   sending a bitmap, they don't infringe Claim 2?

12        A.    That's right.

13        Q.    But if it's something within the three choices

14   here, that could infringe by one?

15        A.    Absolutely.

16        Q.    But if they send a bitmap every time --

17   because the Defendants have chosen to code up their

18   products, to put in that choice from the standard --

19   they send a bitmap every single time, what happens about

20   Claim 2?

21        A.    Well, they infringe it every single time.

22        Q.    Let me talk with you next about the '625

23   patent.

24              We got in a little word game at first about

25   the word coordinate.  Remember?
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 1      A.   Yes, sir.

 2      Q.   And I -- and this is all, you know, my -- my

 3 short-handing for everybody, synchronization versus

 4 coordination.  You know the word synchronization is in

 5 the patent, right?

 6      A.   Yes, sir.

 7      Q.   But I think you got asked, well, boy, that

 8 5,000 pages of reports, you never used the word

 9 coordination anywhere in there?  Do you remember getting

10 asked that a couple or three times?

11      A.   I do.

12      Q.   I -- I went through and I took the time to

13 actually flip through your report on this topic.

14           Is this your section in the '625?

15      A.   Actually I think this is about --

16      Q.   Or the '435 patent?

17      A.   It's about the '435.

18      Q.   That's the other patent I also called the

19 coordination patent?

20      A.   Yes, sir, it is.

21      Q.   Is that what you said about it?

22      A.   Yes, sir.

23      Q.   Okay.  So we -- we can put that to rest that

24 you did use the word coordinate.

25           Let's get into the more substance of this.
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1  Let me ask you to explain your report, and let's walk

2  through your infringement theory on this.

3          Let's be real clear about what you're saying

4  these various commands are.

5          First, we have to have the (a) command and the

6  (b) command.  We have to have them both.  No dispute

7  about that, right?

8      A.   That's right.

9      Q.   The first command is to receive at least one

10 packet having a sequence number not consecutive with the

11 sequence number of the previously received packet.

12         That's the first command.

13         To be real clear, what is that?

14     A.   It's the MPDU and the A-MPDU.

15     Q.   Right.  Do you have to have them both, or is

16 it either/or?

17     A.   It's either/or.

18     Q.   And when they're -- when they're transmitting

19 the aggregated groups of packets, the A-MPDU would be

20 the command, right?

21     A.   Yes.

22     Q.   And then when they're not doing the A-MPDU way

23 of transmitting, a separate different way of

24 transmitting, that would be -- when they're sending just

25 MPUs separately -- excuse me, MPDUs separately, that's

 1  another scenario that they -- that their device is

 2  transmitting?

 3       A.   Right.  That's correct.

 4       Q.   So this (a) would be met by those either

 5  groups of packets or single packets?

 6       A.   Yes, sir.

 7       Q.   Now, let's talk about the block

 8  acknowledgement requests.

 9       A.   Okay.

10       Q.   Are those what handle (b), releasing

11  expectation?

12       A.   Yes, sir.

13       Q.   And I mean, has that been your theory all

14  along?

15       A.   Yes, sir.

16       Q.   There's two flavors of block acknowledgement

17  request's, right.

18       A.   Yes, sir.

19       Q.   Implicit and explicit?

20       A.   That's correct.

21       Q.   Is -- how does the explicit get transmitted?

22       A.   As its own separate packet type.

23       Q.   How does the implicit get transmitted?

24       A.   It's an A-MPDU that has a specific bit set in

25  it that says this is also a block acknowledgement

1  request.

2       Q.   Okay.  And does the patent disclose that that

3  would be sufficient to meet the elements of this claim?

4       A.   Yes, sir.

5       Q.   Explain.

6       A.   Well, I mean, the first command is -- so what

7  the patent explains is that there are different

8  embodiments of the -- there are different ways of

9  potentially meeting the claim.

10           So the fact that the patent talks about the

11  enforcement bit doesn't mean that there aren't other

12  ways to create commands.

13           And here, the command to receive a packet out

14  of order is a command, because the system is designed so

15  that there is no option.

16           The system is designed so that these things

17  are commands, and similarly toward the BARs.

18       Q.   So the way the patent works is they have an

19  example in there, right?

20       A.   Yes, sir.

21       Q.   And let's all be real clear what an example in

22  a patent is.

23           Is there a difference between the example that

24  you write up to build the patent and the claim itself?

25       A.   Absolutely.

 1       Q.    And you understand it is wholly improper to

 2  try to say you don't infringe a patent by comparing what

 3  a Defendant does to the example in the patent?

 4       A.    That's my understanding, yes, sir.

 5       Q.    Okay.  You understand the only legal way of

 6  doing it is compare it to the claim?

 7       A.    Yes, sir.

 8       Q.    Okay.  Now, in the patent itself, tell us

 9  about -- it -- it mentions an enforcement bit.  Is that

10  sent along with the packet?

11       A.    Yes, sir, it is.

12       Q.    Okay.  Now let's say, though, that this

13  command you wanted to write into the receiver.

14       A.    Yes, sir.

15       Q.    And, in fact, isn't that what the standard

16  does?

17       A.    That's exactly what the standard does.

18       Q.    Explain what the standard provides and how

19  that gets written in as a command to the receiver?

20       A.    Well, we actually showed this.  It probably

21  was a little hard to understand.

22            But the standard says that if the MPDU or

23  A-MPDU is received inside the window, that it must be

24  received.  And that's true whether or not it's in

25  sequence or out of sequence.  So when it's out of

1  sequence, it's the out-of-sequence command.  And the

2  patent also explains that if the MPDU or A-MPDU is past

3  the end of the window, that you will shift the window

4  and you will receive the packets.

5          So the two cases both say you have to receive

6  the packet, and that's a command.

7      Q.   Did you show the jury in your direct

8  examination these commands that are in the standard?

9      A.   Yes, sir, I did.

10              MR. STEVENSON:  Mr. Diaz, can you pull up

11  PX 286?

12     Q.   (By Mr. Stevenson)  And I think we're -- I

13  seem to remember this being Page 134.  Let's take a

14  look.  That's a slight guess.

15          Keep going down, Mr. Diaz, I think it's a

16  couple of more pages.  9.10.7.6.  Keep going down.

17     A.   Yes, sir, it's 137.

18     Q.   (By Mr. Stevenson)  137.

19              MR. STEVENSON:  Can you zoom in, Mr.

20  Diaz, on the bottom, 9.10.7.6.2 that Mr. Nettles showed

21  us earlier?

22     Q.   (By Mr. Stevenson)  Is this one of the

23  commands?

24     A.   It's -- it's part of the command.  It says

25  that if it's inside of the -- inside of the window, that

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1   you're going to store it.

2        Q.   All right.  Is this mandatory?

3        A.   Oh, this is mandatory, yes, sir.

4        Q.   Not -- not an element of choice on the part of

5   the receiver involved?

6        A.   No, sir.

7        Q.   And explain to the jury what this is

8   commanding the receiver to do.

9        A.   Well, it's saying that -- the (a) says if the

10  sequence number -- that's the label on the packet -- is

11  inside of the window, that's WinStart and WinEnd, the

12  first thing you do is you store the received MPDU in the

13  buffer.

14       Q.   Now, if you're a company and you want to make

15  802.11 compliant equipment, you go look at the standard

16  and then you've got to build something, fair?

17       A.   Yes, sir.

18       Q.   And that thing you're building is going to

19  have a processor in it of some sort?

20       A.   Yes, sir.

21       Q.   What do you have to code up the processor to

22  do?

23       A.   Well, in this case you have to code up the

24  processor to store the MPDU, if it's in this range.

25       Q.   Is that what -- is that -- is that coding up

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 1  what makes the MPDU a command?

 2      A.   Well, that, plus the fact that there's a

 3  second case that does exactly the same thing.

 4      Q.   What are you referring to?

 5      A.   Well, the second case is the (b) part.  So

 6  that says what happens if it's outside of the window.

 7      Q.   Okay.  Let's scroll down and look at the (b)

 8  part.

 9           So the (a) part says if -- what did the (a)

10  part say?  I don't want to --

11      A.   The (a) part said if it was inside the window,

12  then you store it.

13      Q.   The (b) part says what?

14      A.   That if you're past the window, you store it.

15  So both cases require that you store it.  So in both

16  cases, it's a command.  You don't have any option.

17      Q.   Okay.  And in these systems, do the

18  transmitters and receivers have to play by this same set

19  of rules?

20      A.   Yes, sir.

21      Q.   Does the transmitter understands when it

22  transmits a packet out of sequence, the receiver's got

23  to take it?

24      A.   Yes, sir.  I mean, it doesn't really

25  understand it, but it's programmed that way.  The

106

 1  programmers understood it.

 2      Q.   All right.  But the transmitter on the

 3  transmitter side, whoever is responsible for the

 4  transmitter, whichever manufacturer it is, knows that

 5  when they transmitter an out of sequence MPDU, it's got

 6  to be accepted?

 7      A.   Yes, sir, they do.

 8      Q.   And -- and if you have a standard, you know

 9  the transmitters and receivers are playing by the same

10  set of rules?

11      A.   That's correct.

12      Q.   That's what's meant by synchronization or

13  coordination?

14      A.   Yes, sir.

15      Q.   Now, similarly for the '435 patent, is there

16  also a computation built into it?

17      A.   In the claims?  Yes, sir.

18      Q.   So we're going to go to the '435 now.  And

19  it's a different wording in the claims.  This is the

20  receiver side.

21          This is the receiver side that is written a

22  little bit differently, isn't it?

23      A.   Yes, sir, it is.

24      Q.   And what this requires is computing which data

25  packets have been discarded.  I think that's the element

 1  that defense counsel zoomed in on as the one he

 2  discussed with you.

 3      A.   That's right.

 4      Q.   So you need a computation on the receiver

 5  side?

 6      A.   Yes, sir.

 7      Q.   Command from the transmitter, computation

 8  receiver?

 9      A.   That's right.

10      Q.   And what does the receiver have to compute

11  under that claim?

12      A.   Well, it has to compute which packets have

13  been discarded by the transmitter.

14      Q.   Okay.  How -- does the standard prescribe how

15  the computation is supposed to be carried out?

16      A.   No, sir, not at all.

17      Q.   What -- what is prescribed about the

18  computation?

19      A.   That it's done and that it computes from the

20  information that comes in which packets have been

21  discarded.

22      Q.   Okay.  Can we look at the rule book to see

23  what the receiver has to do in order to make a

24  computation?

25      A.   Yes, sir, we can.

 1      Q.    And I wrote that down.  It was 9.10.7.3 --

 2            MR. STEVENSON:  Can you --

 3      Q.    (By Mr. Stevenson) -- of 286.

 4            MR. STEVENSON:  Can you pull that up, Mr.

 5  Diaz?

 6      Q.    (By Mr. Stevenson)  Are these the rules that

 7  the receiver has to abide by with regard to getting

 8  packets?

 9      A.    Yes, sir.  In particular, the (b) section

10  talks about it when it's the A-MPDU that is the discard

11  notification.  And the (c) section talks about it when

12  it's the explicit BlockAck that's the discard

13  notification.

14      Q.    Okay.  Let me stick on this.  So let me make

15  sure I understand this.  The receiver has to go through

16  this in order to decide what to do with the packet,

17  right?

18      A.    Yes, sir.  And in particular, which packets

19  to -- to discard.

20      Q.    How do you do that without making a

21  computation?

22      A.    You don't.

23      Q.    Let me ask you next about the '568.

24            This is an apparatus claim.  Do you remember,

25  Dr. Nettles?

1      A.    I do.

2      Q.    So what we're asking is, do the accused

3  devices contain hardware in them and whatever lower

4  level programming is necessary to perform the functional

5  limitations?

6      A.    That's right.

7      Q.    Do you remember getting your first HDTV?

8      A.    I do.

9      Q.    I'm guessing you were an early adopter?

10     A.    Yes, sir, I was the 20th person in Austin to

11  have a Time Warner HD cable connection.

12     Q.    All right.  And that TV of yours, that was the

13  wide TVs?

14     A.    Oh, yes, sir, it's very big.  It's bigger than

15  this witness box.

16     Q.    But you remember when you first got it, the

17  wide TV and it was capable of showing hi-def TV, but a

18  lot of times -- there weren't that many shows out there.

19           They'd all sort of scrunch together and you'd

20  have those black bars on the side.  Do you remember?

21     A.    That's exactly correct.

22     Q.    But then after a while, the programming caught

23  up and now it seems most everything is in hi-def?

24     A.    Yes, sir.

25     Q.    But your hardware was capable of using the

110

 1  hi-def?

 2       A.   Yes, sir.

 3       Q.   You had a handful of shows that you probably

 4  had to watch even stuff you didn't like.

 5            Back to the '568.  Now, the -- the laptops and

 6  the routers in this case are capable, aren't they, of

 7  doing the TID value that corresponds to video and voice?

 8       A.   Yes, sir, that's correct.

 9       Q.   So now you got some questions about

10  necessarily.  I think that was the word in the

11  questions, not necessarily.  You can tell what the

12  content is, from looking at the TID value?

13       A.   That's right.

14       Q.   Now, let me ask you a different question.

15            If a program is taking advantage of this TID

16  capability, all right --

17       A.   Yes.

18       Q.   -- hi-def program and assuming the coders of

19  the program are playing by the rules and are reading the

20  standard --

21       A.   Yes, sir.

22       Q.   -- should the TID value correspond if it's

23  voice or video?

24       A.   Yes, sir.

25            MR. STEVENSON:  Now, let's go to Slide

 1  39, please.

 2      Q.   (By Mr. Stevenson)  If you're a company and

 3  you're out there and you have an application, let's say

 4  it's a Skype or it's a something else, and you want to

 5  use this enhancement, you want to put that in your

 6  program, I assume that program's got to send these

 7  packets down -- you know, we talked about the

 8  application layer and it trickles down to the radio

 9  layer -- it's got to send it down there to be sent out,

10  right?

11      A.   That's right.

12      Q.   And where in that layer of stacks does this

13  TID value get put in the packet and all arranged

14  together?

15      A.   This will get put in the -- this TID value

16  will get put in the packet in the MAC layer.

17      Q.   All right.  That's -- that's the one right

18  before it gets sent out the door?

19      A.   That's right.

20      Q.   If the program sitting at the top is using

21  this and sending this information down to the TID value,

22  what does the standard tell the people writing these

23  programs they should use as far as numbers go?

24      A.   Well, for example, that for voice, they should

25  use 6 or 7; and for video, they should use 4 or 5.

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 1       Q.   Let me ask you last about the '223.  You got

 2  into some discussion about segmenting and fragmenting

 3  and encapsulation.

 4       A.   Yes, sir.

 5       Q.   And I think two of those three terms don't

 6  appear in the claim.  Which terms appears in the claim?

 7       A.   Segmenting.

 8       Q.   Now, segmenting is what needs to be done in

 9  order to comply with the claim language, right?

10       A.   That's right.

11       Q.   And counsel for defense suggested that you've

12  got to cut a picture into three parts in order to

13  segment it, right?

14       A.   That's what they suggested, yes, sir.

15       Q.   What does the claim require?  Because this is

16  the legal definition of what we are talking about in

17  this lawsuit.  What does the claim require?

18       A.   At least one.

19       Q.   So you can segment the service data unit into

20  at least one protocol data unit?

21       A.   That's right.

22       Q.   Is that what the Defendants are doing?

23       A.   Yes, sir, it is.

24            MR. STEVENSON:  No further questions.

25            Thank you, Dr. Nettles.
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 1                    THE COURT:  All right.  Any recross?

 2                    MR. VAN NEST:  Can I have just a few

 3   minutes, Your Honor?

 4                    THE COURT:  All right.

 5                    (Pause in proceedings.)

 6                    MR. VAN NEST:  I'll be brief.  Famous

 7   last words, right?

 8                         RECROSS-EXAMINATION

 9   BY MR. VAN NEST:

10        Q.   Good afternoon again, Dr. Nettles.

11        A.   Good afternoon.

12        Q.   I just want to go over a couple of things that

13   you covered with Mr. Stevenson.

14             Back on the '215, I think you said earlier

15   that -- just to clarify the parties' positions and where

16   we are -- you've confirmed through all your testing and

17   your examinations and your review that the products that

18   you're accusing of infringement, they only send one kind

19   of acknowledgement?

20        A.   That's correct.

21        Q.   Every single time they send one, right?

22        A.   Yes, sir, that's correct.

23        Q.   So with respect to the product, the receiver

24   in the products doesn't have a choice.  It must send

25   the -- the bitmap -- the compressed bitmap that you know
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 1  is -- exists in the products, right?

 2      A.   Yes, sir.  It also has to send the TID

 3  field --

 4      Q.   Right.

 5      A.   -- that says it's a compressed bitmap.

 6      Q.   But in terms of choosing from a number of

 7  different message types, the receiver in the products

 8  that you're accusing, it doesn't have that choice,

 9  right?

10      A.   Well, the programmers made that choice.

11      Q.   That wasn't my question.

12           The receiver in the product that you're

13  accusing, it doesn't have a choice from among a number

14  of different message types; it must send the one that it

15  has, right?

16      A.   It will always send a compressed BlockAck,

17  yes, sir.

18      Q.   Now, I think you testified earlier that the

19  whole crux of the invention involves the creation of

20  choice in the receiver of multiple different message

21  types, right?

22      A.   Yes, sir, I think you showed me some testimony

23  of that sort.

24      Q.   And you said:  I would tend to agree that the

25  crux of the invention is the creation of choice in the

1  receiver of different message types, right?

2        A.    Yes, sir.

3        Q.    And that's what the inventor told us yesterday

4  when he came here by video, right?

5        A.    Yes, sir.

6        Q.    He said the key element of my invention is

7  having a choice of message type to send, right?

8        A.    Yes, sir, he did.

9        Q.    That choice doesn't exist in any of the

10 receivers that any of the Defendants in this case sell,

11 does it?

12       A.    No, sir, I can't agree with that.

13       Q.    Now, let's go on to the '435, if I can put

14 that back up.

15             Now, with respect to the '435, the claim

16 element that we are disputing is this now-familiar

17 computing step, right?

18       A.    Yes, sir.

19       Q.    The receiver has to compute which data packets

20 have been discarded by the transmitter, right?

21       A.    That's correct.

22       Q.    So I think we have this clear, but the

23 computing that is required by the claim, is that the

24 receiver compute not what it's going to discard but what

25 packets have been discarded by the receiver -- by the

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1  transmitter, right?

2       A.   Yes, sir, that's correct.

3       Q.   Now, isn't it the case that the computing step

4  of this claim requires an identification of at least all

5  of the packets that have been discarded by the

6  transmitter?

7       A.   Yes, sir, I think that's correct.

8       Q.   And you testified to that effect in your

9  deposition, right?

10      A.   Yes, sir, I did.

11      Q.   But when a BlockAck request is sent from the

12  transmitter to a receiver in an 802.11n system, that

13  request will not allow the receiver to identify which of

14  the previously-acknowledged packets the transmitter has

15  discarded, will it?

16      A.   No, sir, it won't.

17      Q.   So in that instance, the receiver is not able

18  to calculate all of the packets that have been discarded

19  by the transmitter, right?

20      A.   Actually, I -- I apologize.  I -- I think I

21  misunderstood your question.

22           Was the previous question involving the

23  packets that had been acknowledged?

24      Q.   It did.

25      A.   Then -- then, yes, the receiver will be able

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1    to calculate that.

2                    MR. VAN NEST:  Could we hear Dr. Nettles'

3    deposition transcript from Page 240, Line 6 through Line

4    18, please.

5                    (Video clip playing.)

6                    QUESTION:  When a BlockAck request is

7    transmitted from a transmitter to a receiver --

8                    ANSWER:  Okay.

9                    QUESTION:  -- will the BlockAck request

10   allow the receiver to identify which of the

11   previously-acknowledged packets that the transmitter

12   discarded?

13                   ANSWER:  No.  What a BlockAck request

14   does with respect to the receiver in 802.11 is establish

15   with the receiver which packets it's still expecting

16   that it can cease to expect.  So to use the -- the

17   language of the -- of the '625, it allows the receiver

18   to release any expectation of receiving outstanding

19   packets having sequence numbers prior to at least one

20   packet.

21                   (End of video clip.)

22        Q.   (By Mr. Van Nest)  Will you stand on that

23   answer, Dr. Nettles?

24        A.   Yes, sir, I will.

25        Q.   And the same thing is true for the aggregated

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1  packet -- the group of packets that are sent when you're

2  running in block mode.  Those packets similarly will not

3  allow the receiver to determine which of the

4  previously-acknowledged packets were discarded by the

5  transmitter, will they?

6       A.   No, sir, I can't agree with that.

7            MR. VAN NEST:  Let's hear from Dr.

8  Nettles' transcript, Page 231, Lines 17 through 22.

9            (Video clip playing.)

10            QUESTION:  Okay.  And when a message is

11  sent to the receiver --

12            (Video clip stopped.)

13            MR. VAN NEST:  Excuse me, I'm sorry.

14            Could we -- we missed some of the

15  question.  Have we started on the question line?  Fair

16  enough.  Excuse me.  Run it again.  I apologize.

17            (Video clip playing.)

18            QUESTION:  Okay.  And when a message is

19  sent to the receiver with a sequence number in it, that

20  message will not allow the receiver to determine or

21  identify which of the previously-acknowledged packets

22  the transmitter discarded?

23            ANSWER:  That's correct.

24            (Video clip ended.)

25       Q.   (By Mr. Van Nest)  And you'll stand on that

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1  answer, Dr. Nettles, correct?

2       A.    Yes, sir, I will.

3       Q.    And that question had to do with this

4  aggregated group of packets, correct?

5       A.    No, sir, I don't agree with that.

6       Q.    In any event, in connection with the '435, if

7  the receiver cannot compute all of the packets that were

8  discarded by the transmitter, then there's no

9  infringement, right?

10      A.    That's my understanding, yes, sir.

11            MR. VAN NEST:  I have nothing further,

12  Your Honor.

13            THE COURT:  Any further redirect?

14            MR. STEVENSON:  One brief, Your Honor.

15            THE COURT:  All right.

16                REDIRECT EXAMINATION

17  BY MR. STEVENSON:

18      Q.    Dr. Nettles, in that last video clip that was

19  shown, it looks like it stopped and you were still

20  talking a little bit, so I went and got the transcript;

21  and that last answer, did you get cut off with an "okay"

22  and then continue:  Nor does it need to for the patent

23  to work the way it's supposed to?

24      A.    Yes, sir, I did.

25      Q.    Thank you.

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 1              MR. STEVENSON:  No further questions.

 2              THE COURT:  All right.  Thank you.

 3              Anything further?

 4              MR. VAN NEST:  No, Your Honor.

 5              THE COURT:  All right.  You may step

 6  down, Dr. Nettles.

 7              All right.  Who will Plaintiff's next

 8  witness be?

 9              COURTROOM DEPUTY:  Questions, Judge.

10              THE COURT:  I'm sorry.  Before you step

11  down, if you will, pass your questions down.

12              (Pause in proceedings.)

13              THE COURT:  All right.  I am going to let

14  you take about a five-minute recess while I go over

15  these questions with the attorneys for both sides, so

16  we'll be in recess.

17              COURT SECURITY OFFICER:  All rise.

18              (Jury out.)

19              THE COURT:  Please be seated.

20              All right.  Here is the first question:

21  How can comparing source code in the patent to source

22  code used by the Defendants be so subjective, question

23  mark?  Can it vary so as to be subject to

24  interpretation; for example, whether the computation

25  coding is there or not?
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 1                   THE WITNESS:  I'm not quite sure I

 2  understand that question because there really isn't any

 3  source code in the patent.

 4                   THE COURT:  Well, before you answer it,

 5  let me hear any objections to the question.

 6                   MR. STEVENSON:  May we ask the Court to

 7  read that again?

 8                   THE COURT:  Yes.  Let me read it again.

 9                   And the first -- I think I know what

10  they're -- I don't think they're really asking about

11  source code.  I think they're using that word, but they

12  say:

13                   How can comparing source code in the

14  patents -- I think what they're saying is, how can

15  comparing the patent to source code to the products used

16  by Defendants be so subjective?

17                   The question, as stated -- I was

18  paraphrasing there or adding words, but the question as

19  stated is:  How can comparing source code in the patents

20  to source code used by Defendants be so subjective?

21                   Then they go on to say:  Can it vary so

22  as to be subjective to interpretation; for example,

23  whether the computation coding is there or not?

24                   MR. STEVENSON:  That strikes me as a

25  vague question.  I don't know which direction it's

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1  going.

2               THE COURT:  Okay.  So do you have an

3  objection to the question?

4               MR. STEVENSON:  Well, I do.  Just the --

5  you know, the subjective part of it, I don't know how

6  the witness can even be able to answer on a basis like

7  that.  Why is this process subjective, I think that's --

8               THE COURT:  Okay.  Do Defendants --

9               MR. STEVENSON:   -- the fact-finding

10 province of the jury.

11              THE COURT:  Do Defendants have -- concur

12 or disagree?

13              MR. VAN NEST:  I think -- excuse me, Your

14 Honor.  I think I concur.  We shouldn't be asking that

15 question.

16              THE COURT:  All right.  The Court will

17 decline to ask that question.

18              All right.  The next question is:  No. 1,

19 any computer programmer could be capable of creating the

20 Wi-Fi chip using the standard 802.11n without obtaining

21 a license from Ericsson, question mark, or anyone else?

22              MR. STEVENSON:  Again, I was going to

23 say, it's (a) a legal question; (b) it's beyond the

24 scope of this witness's testimony.

25              THE COURT:  Okay.  Do you concur?

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 1                    MR. VAN NEST:  I agree, Your Honor.

 2                    THE COURT:  You agree?

 3                    MR. VAN NEST:  Concur, yes.

 4                    THE COURT:  All right.  Next:  Are

 5  Ericsson's patents definitely included in the 802.11n

 6  standard?

 7                    [Laughter]

 8                    THE COURT:  You think he could answer

 9  that one.

10                    [Laughter]

11                    MR. VAN NEST:  I think we ought to leave

12  that one out, Your Honor.

13                    [Laughter]

14                    THE COURT:  I think I will ask that

15  question, but I'll take out the word definitely.  I

16  think I'll just say:  Are Ericsson's patents included in

17  the 802.11 standard?

18                    I think you've already answered your

19  opinion, but he can express it, and you can re-cross

20  him.

21                    And then the next question:  Is there a

22  list of patents on the 802.11n, question mark?

23                    MR. STEVENSON:  That may be outside the

24  scope of this witness's designation and report and

25  expertise.

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1                    THE COURT:  Concur?

2                    MR. VAN NEST:  I concur in that, Your

3   Honor.  I also think -- oh, go ahead.  Excuse me.

4                    THE COURT:  All right.  And finally, on

5   the 802.11 receiver, isn't the green light to receive

6   packets in any order due to the '625 patent?

7                    MR. STEVENSON:  I think he should be able

8   to answer that.

9                    MR. VAN NEST:  I don't think so, Your

10  Honor.  I mean, there's no evidence -- that suggests

11  that somebody copied from the '625, and there's no

12  evidence of that, and they haven't either offered it,

13  and they said that it doesn't matter.

14                   So I don't think -- due to the '625, it

15  suggests that it was taken from it, and there is no

16  evidence of that.  I don't think that would be proper.

17                   THE COURT:  All right.  I'm going to

18  allow that question to be answered, and you can follow

19  up.

20                   So the questions I'm going to ask are:

21                   Are Ericsson's patents included in the

22  802.11 standards?

23                   MR. VAN NEST:  Your Honor, could I

24  re-raise that one?

25                   THE COURT:  Yes, you may.

1                    MR. VAN NEST:  I mean, what I'm -- it

2   seems to me improper to -- they're asking about the

3   standard and whether there's some list of patents.

4   That's related to the other question.  And that's really

5   not within the field of this expert's testimony.

6                    He's certainly testifying about

7   infringement, but whether something is not -- is in or

8   out, listed on the standard is not the point.  The point

9   is, is there infringement?  He's testified fully about

10  that.

11                   I think allowing jurors to hear that

12  answer is going to be very confusing for them.

13                   THE COURT:  All right.  Let me ask the

14  witness if he feels he can answer that question.

15                   THE WITNESS:  Well, I mean, I do have an

16  opinion that these patents -- that these patents are

17  standard essential, so it seems like that speaks to this

18  question.

19                   THE COURT:  All right.

20                   MR. VAN NEST:  That doesn't appear to me

21  to be what the juror is asking.

22                   THE COURT:  Well, this is what we get

23  into with jurors' questions.  Who knows exactly what

24  they're asking?  You have one read on it; somebody else

25  has another read.  I'm going to overrule your objection

 1  as to that one.

 2              And then the other question I'll ask is:

 3  On the 802.11n receiver, isn't the green light to

 4  receive packets in any order due to the '625 patent?

 5              MR. VAN NEST:  And, Your Honor, just --

 6  excuse me -- "due to" is what I'm objecting to.  What

 7  does that mean?  Does that mean copied from?

 8              If -- if -- I think there should be some

 9  indication from the Court, if you're going to ask that,

10  that there's no claim here that anything was copied by

11  any of the Defendants.  I mean, otherwise, I think it's

12  very misleading, because there is no claim of copying.

13              MR. STEVENSON:  That's -- Your Honor,

14  not --

15              THE COURT:  How about if I said "covered

16  by" instead of "due to"?  Would that --

17              MR. VAN NEST:  Fine.

18              THE COURT:  -- give you some comfort?

19              MR. VAN NEST:  He already said that many

20  times, so that's fine.

21              THE COURT:  Is that all right with you?

22              MR. STEVENSON:  Yes, that's fine.

23              THE COURT:  All right.  Bring the jury

24  in, please.

25              COURT SECURITY OFFICER:  All rise for the

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 1  jury.

 2                  (Jury in.)

 3                  THE COURT:  Please be seated.

 4                  All right, Dr. Nettles.  I have a couple

 5  of questions for you here from the jury.

 6                  The first question is:  Are Ericsson --

 7  Ericsson's patents included in the 802.11 standard?

 8                  THE WITNESS:  So you'll remember that --

 9  I testified that the patents were what's called standard

10  essential.  And that's an opinion that I stated that, in

11  fact, they are included; that the standard -- if you

12  implement the standard, then you're going to practice

13  the patents, the methods of the patent, or you're going

14  to build an apparatus.  That's my understanding of what

15  standard essential means.

16                  So I would say the answer -- my answer to

17  that question would be yes.

18                  THE COURT:  All right.  Thank you.

19                  And the next question:  On the 802.11

20  receiver, isn't the green light to receive packets in

21  any order covered by the '625 patent?

22                  THE WITNESS:  So, in my opinion, the '625

23  patent is infringed by the receiver, and so in that

24  sense, if that's the -- what "covered" means, then, yes,

25  I think so.
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1                    THE COURT:  All right.  Thank you.

2                    All right.  Any follow-up questions from

3   Plaintiffs' counsel?

4                    MR. STEVENSON:  No further questions,

5   Your Honor.

6                    THE COURT:  All right.  Any from

7   Defendant?

8                    MR. VAN NEST:  Just one or two, Your

9   Honor.

10                    THE COURT:  All right.

11                    RECROSS-EXAMINATION

12  BY MR. VAN NEST:

13     Q.   Dr. Nettles, with respect to the question of

14  whether the patents are in or out of the -- are

15  essential or not, although it's your opinion that they

16  are, no one at the IEEE has made that determination,

17  correct?

18     A.   That's correct.

19     Q.   The IEEE doesn't make a determination:  Here

20  are the 50 patents that are essential.  That's not part

21  of their job?

22     A.   That's right.

23     Q.   All right.  It's your opinion it's essential

24  because you say it's infringed; but, again, no other

25  body, court, or organization has made that

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1  determination, right?

2      A.   That's right.

3              MR. VAN NEST:   Thank you.

4              THE COURT:   Okay.   Thank you.

5              All right.   You may step down,

6  Dr. Nettles.

7              All right.   Who will Plaintiffs' next

8  witness be?

9              MR. NEMUNAITIS:   Your Honor, in a moment,

10  my colleague, Mr. Campbell, is going to call John Bone,

11  but I'd like to read a brief interrogatory into the

12  record.

13             THE COURT:   All right.   And let me

14  explain first to the jury what an interrogatory is.

15             Ladies and Gentlemen of the Jury, also,

16  you've heard about depositions that are taken as part of

17  the pretrial proceedings prior to trial.   Another thing

18  that is done are what's called interrogatories.

19             And an interrogatory is a written

20  question that one party sends to another party, and then

21  they answer that question under oath.

22             So it's similar to a deposition, but it's

23  by written questions with a written answer.   And Counsel

24  now wishes to introduce one or more of those

25  interrogatories and answers.

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1             So you may proceed.

2             MR. NEMUNAITIS:  This is Defendants

3  Toshiba Corporation and Toshiba America Information

4  Systems, Inc.'s First Supplemental Responses to

5  Plaintiff's Ericsson's, Inc., and Telefonaktiebolaget LM

6  Ericsson's Fifth Set of Interrogatories.

7             I'm just reading one.  It will be just a

8  couple of minutes.

9             Defendant Toshiba Corporation TC and

10  Defendant Counterclaimant Toshiba America Information

11  Systems, Inc., (TAIS) is collectively defined as

12  Toshiba.

13             Interrogatory:  Explain how you select

14  chipsets to provide 802.11 functionality for all of the

15  products identified in response to Interrogatory No. 1.

16             Your answer should include an explanation

17  of how you agree on pricing, the features, parameters,

18  and characteristics that you consider when selecting a

19  chipset, an identification of the documents that you

20  rely on to make those determinations.

21             Toshiba refers to the deposition

22  testimony of Kazuya Fukushima relating to Toshiba's

23  selection and integration of 802.11 chipsets into

24  Toshiba products.

25             For example, refer to Pages 38 through 48

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1  of the transcript of Mr. Fukushima's September 27th,

2  2013, 30(b)(6) deposition.

3              To select a particular 802.11 chip for

4  inclusion in a Toshiba product, Toshiba considers the

5  features and specifications of available 802.11 chips

6  for a particular product.

7              Selection of the chip is driven by

8  various business factors, including advanced features

9  that may be newly available, wireless component prices,

10  and the price point of the particular product.

11              Toshiba selects the suppliers who's

12  wireless components are understood to meet the desired

13  features and specifications.  Once candidate suppliers

14  and wireless components are identified, the wireless

15  components are tested to ensure they are of sufficient

16  quality for inclusion in a Toshiba product.

17              After this quality testing, wireless

18  components are selected for inclusion based on a number

19  of factors, including but not limited to the quality of

20  the wireless component, Toshiba's relationship with the

21  supplier, the reputation of the supplier, the reputation

22  of the supplier, and component price.

23              THE COURT:  All right.  Thank you.

24              Who will be your next witness?

25              MR. CAMPBELL:  John Bone.

1                    THE COURT:  All right.  John Bone.

2                    You've been sworn, haven't you?

3                    THE WITNESS:  Yes, sir.

4                    THE COURT:  All right.  You may proceed.

5                    MR. CAMPBELL:  Thank you, Your Honor.

6        JOHN BONE, PLAINTIFFS' WITNESS, PREVIOUSLY SWORN

7                         DIRECT EXAMINATION

8   BY MR. CAMPBELL:

9        Q.   Good afternoon, sir.

10       A.   Good afternoon.

11       Q.   Could you please introduce yourself to the

12   jury.

13       A.   My name is John Bone.

14       Q.   And why are you here to talk to us today?

15       A.   So I'm here to talk about the amount that the

16   Defendants should pay Ericsson in the form of a

17   reasonable royalty for using Ericsson's technology.

18       Q.   Okay.  And have you prepared a set of slides

19   to help with your discussion today?

20       A.   I have.

21       Q.   All right.  Now, we'll walk through your

22   analysis, but the jury probably doesn't want to be kept

23   in suspense.  What did you conclude is the proper

24   reasonable royalty rate for the use of Ericsson's

25   patents?

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 1      A.    So I actually concluded to a range of royalty

 2  rates based on the actual transactions, based on the

 3  actual license agreements that Ericsson has entered into

 4  with a number of companies.

 5           Now, Ericsson has a reference rate that it

 6  uses.  It's 50 cents per unit.  And that happens to be

 7  in the middle of the range of rates that I've concluded

 8  to.

 9           So it's my opinion that a 50-cent-per-unit

10  royalty rate is a reasonable conclusion to reach.

11      Q.    Okay.  And what does that mean in terms of the

12  total reasonable royalty for the Defendants?

13      A.    So if you take that 50-cent royalty and you

14  multiply it by the number of routers and computers that

15  use Ericsson's technology, you come up with -- with

16  what's seen on this slide here for each Defendant.

17           So in the case of Acer, when you do that

18  calculation, the royalty would be $3.9 million.

19           For Toshiba, it would be 8.1 million.

20           For Dell, it would be 6.4 million.

21           For D-Link, 1.4 million.

22           For Belkin, 2 million.

23           And for NETGEAR, 11.8 million.

24      Q.    Okay.  Now, Defendants didn't say in opening

25  what they think the proper reasonable royalty rate is,
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1    but let me ask you this:  Is the way this process works

2    is that you're proposing a royalty hoping the jury falls

3    somewhere in the middle between yours and whatever they

4    propose?

5         A.   No.   So my conclusions are based on the actual

6    transactions that have occurred, the market rates that

7    other companies paid for Ericsson's technology.

8              So if the jury finds a number that's, say,

9    something in between what I've concluded to and what the

10   other expert that you'll hear from will have concluded

11   to, then the Defendants in this case would get a much

12   better deal than the companies that actually licensed

13   Ericsson's technology in the normal course of business.

14        Q.   Okay.  Well, let's walk through your analysis

15   and let's give the jury a little bit better introduction

16   to you and your qualifications.

17             First of all, let them find out a little bit

18   about you.  Are you married?  Do you have kids?

19        A.   Sure.  So I am married.  In fact, last week I

20   just -- my wife and I celebrated our 20th wedding

21   anniversary.  We have four kids; three daughters, one

22   son.  And they range in age from 8 to 17.

23        Q.   Okay.  How about your educational background?

24   What is your educational background that might bear on

25   this case?

 1      A.   So I attended the University of Michigan.  I

 2  studied accounting and finance there.  And then I got a

 3  degree in business administration.  And then I attended

 4  the University of Chicago where I received by MBA, or

 5  that's a Master's in Business Administration.

 6      Q.   Okay.  And do you hold any certifications?

 7      A.   I do.  I'm a Certified Public Accountant, or

 8  what's also known as a CPA, and I have a subdesignation

 9  within that.  It's called a CFF, and that's for

10  Certified in Financial Forensics.

11      Q.   And where is your current work position?

12      A.   So I'm a managing director with a valuation

13  firm called SRR, or Stout Risius Ross.

14      Q.   And what sort of experience do you have doing

15  the type of work you've done in this case?

16      A.   So I've been calculating damages for 25 years.

17  And much -- I would say most of that have been in the

18  context of patent disputes like we have here today.

19           Now, over the course of my 25 years, I have

20  had the benefit of reviewing literally thousands of

21  license agreements, which help me to understand -- to

22  review and understand the various license agreements

23  that have been produced not only by Ericsson but also

24  the Defendants in this case.

25           And there have been many license agreements

1 that have been produced, but they -- that experience

2 allows me the benefit of understanding the value that

3 someone places on a particular technology.

4      Q.   Okay.  Well, let's get into your

5 investigation.

6           In the first slide here, you've titled 2007

7 Hypothetical Negotiations.  What negotiations are you

8 referring to here?

9      A.   So as a financial analyst, my task is to

10 figure out, you know, what the result would be if

11 Ericsson and each one of the Defendants had gone into a

12 room and negotiated a license for Ericsson's technology.

13           Now, we put that negotiation back in time.  We

14 assume it would have happened when the Defendants first

15 started using the technology.  And so that would have

16 been in 2007.

17           Since that hasn't happened, we call it a

18 hypothetical negotiation.

19      Q.   Okay.  Now, is it your understanding that in

20 re-creating this hypothetical negotiation, that you need

21 to do -- the law requires you to make certain

22 assumptions?

23      A.   Yes.  So there's a very important assumption

24 that is made with respect to this hypothetical

25 negotiation, and that is that the parties have to assume

1  that the patents are valid and infringed.

2          In other words, the Defendants would have

3  walked into that room knowing that they infringed valid

4  patents, and they had to walk away with an agreement.

5      Q.   Okay.  You say 2007 hypothetical negotiations,

6  but when exactly would these hypothetical negotiations

7  have taken place?

8      A.   So in my opinion, based on my review of the

9  records, the Defendants began selling products that were

10  compliant with the 802.11 standard in as early as March

11  2007.

12      Q.   Okay.  Now, in re-creating this negotiation,

13  this hypothetical negotiation, what are you trying to

14  measure?

15      A.   What you're trying to measure is the --

16  essentially, you're trying to measure -- excuse me --

17  the value of the technology, particularly as it relates

18  to all the other technology that's in the product,

19  whether it's a computer or a router.

20      Q.   Okay.  Is that unique to a hypothetical

21  negotiation, or would that happen in a real-world

22  negotiation as well?

23      A.   No.  So that's the same analysis that

24  companies would go through in normal negotiations.  So

25  it's likely the same analysis that companies that did

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1   enter into agreements with Ericsson did when they were

2   determining how much they were willing to pay for

3   Ericsson's technology.

4        Q.    Okay.  And what type of royalty payment did

5   you determine that Ericsson and the Defendants likely

6   would have agreed to in 2007?

7        A.    So it's my opinion that the parties would have

8   agreed to a running royalty.  If you recall,

9   Ms. Petersson testified to that form of a royalty, and

10  that's a royalty that's paid for every time a product is

11  sold.  You can think of it as a pay-as-you-go-type

12  system.

13           Alternatively, the parties could have agreed

14  to a lump-sum payment.  That means a single payment

15  upfront.

16           Now, one of the challenges with that is that

17  when determining the amount of a lump sum, it needs to

18  compensate or account for not just all the past

19  infringement but all future infringement as well.

20           So that's critically important.  My analysis

21  focuses only on the past infringement.

22       Q.    Well, in those two alternative arrangements, a

23  running royalty and a lump sum, are the risks borne

24  differently by the different parties in those -- in

25  those two types of arrangements?

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1     A.   Yes.  So in a running royalty structure, the

2   licensor, or in this case, Ericsson, really bears the

3   risk, because what's -- yeah.  I take that -- yeah,

4   they're bearing the risk.  I apologize about that --

5   because what's happening there is, Ericsson is agreeing

6   to license out their technology to another company, and

7   the other company's agreeing to pay every time they use.

8         Now, if the company decides that they don't

9   need to use it or it becomes obsolete, then they don't

10  have to pay any royalties to Ericsson.

11         Now, in a -- in a lump-sum arrangement where

12  the company is paying a lump sum, a single amount, that

13  places the risk on the company that's taking the

14  license.  Because what's happening there is, they're

15  putting a lot of money upfront; and so if for some

16  reason they choose not to use the technology, it becomes

17  obsolete, then essentially they pay for something that

18  they aren't using.

19     Q.   Okay.  And now, when you're figuring out the

20  proper reasonable royalty rate in this hypothetical

21  negotiation, what's the methodology you use as a

22  financial analyst?

23     A.   So in situations like this, it's common --

24  it's not just common, but it's accepted practice and

25  recognized by the Court, to consider a number of

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1  factors.  And I believe Judge Davis will identify a

2  number of factors that are important here.

3          And -- and so I've considered those factors in

4  determining what the appropriate royalty rate would be.

5      Q.   And which of those factors that Judge Davis

6  will identify did you consider?

7      A.   I considered all the factors.

8          Now, with that said, some factors are more

9  important than others.  And in this particular case, I

10 have found that the actual license agreements were very

11 instructive.

12         And it's kind of hard to appreciate; but

13 having done this for a number of years, it's not often

14 you have a case where you have a lot of license

15 agreements for the very patents-in-suit.

16         In fact, it's not often when folks like --

17 when I've been engaged to do a valuation where you don't

18 have any license agreements for the patents-in-suit, yet

19 we still have to come up with a value.

20         So I think this is a very unique case.

21         And then actual license agreements are

22 typically at the top of the list of things that one

23 would consider.

24         Of course, there's a number of other factors,

25 not all of which are relevant.  Sometimes some of these

1  factors are irrelevant based on the facts of the case.

2      Q.   Okay.  Well, in going through and analyzing

3  these factors and considering the proper royalty rate,

4  what sources of information did you consider?

5      A.   So I considered a variety of sources.  Spent a

6  lot of time reviewing employee testimony.  So this would

7  be testimony of not just Ericsson employees, but also

8  the testimony of the Defendants' employees.

9           I've also looked at many court filings.  That

10  would include interrogatory, interrogatory responses,

11  things of that nature.  I've reviewed the patents in the

12  case.

13          I've also looked at various business records,

14  including the license agreements, which I've referred to

15  already.  But that would also include royalty reports,

16  business plans, e-mail correspondence, a whole host of

17  business records.

18          I've also considered articles, publications,

19  press releases.  I've done some independent research as

20  well.

21          And I've also considered the expert reports.

22  So there have been expert reports submitted by the

23  technical experts.  You've heard from Dr. Nettles.

24  You'll hear from some later.

25          I've also considered the expert reports of

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 1  the -- there are other financial experts that are --

 2  that will be testifying.

 3      Q.   And how much time did you spend investigating

 4  this matter?

 5      A.   I've spent several -- several hundred hours

 6  working on this.

 7      Q.   And how much does your firm charge an hour for

 8  your time?

 9      A.   $495 an hour.

10      Q.   Okay.  Well, let's get into your analysis.

11           How do you categorize the Defendants in this

12  case?

13      A.   So we have two different types of Defendants.

14  We have the computer makers, and we have the laptop --

15  excuse me -- the computer makers and the router makers.

16           So as you see here on the slide, we have -- on

17  the left-hand side, you have companies such as Dell,

18  Toshiba, and Acer.

19           On the right-hand side, you have the router

20  Defendants:  NETGEAR, Belkin, and D-Link.

21      Q.   Okay.  Now, let's make sure we're clear.

22  Does Dell, Toshiba, and Acer -- are the accused products

23  only computers?

24      A.   No.  So Dell, Toshiba, and Acer do sell things

25  other than laptops.  You know, for example, they may

143

1  sell Blu-ray players, but 95 percent of all of the

2  products that infringe are computers.

3       Q.   Okay.  How about for the router Defendants?

4  Do they just sell routers that are accused in this case?

5       A.   No.  So they do sell routers, adapters, range

6  extenders, other products.  But for the router

7  Defendants, I believe 97 percent of all the products

8  that infringe Ericsson's patents are either routers or

9  adapters.

10      Q.   Okay.  Now, why, for purposes of your

11  analysis, did you break the Defendants up into these two

12  groups?

13      A.   Well, I think it's important for one main

14  reason.  And Ms. Petersson actually alluded to this in

15  her testimony.  And that is, you know, Wi-Fi has a

16  different significance for a router than it does for a

17  computer.

18           If you think about it, a router has one

19  primary purpose and that is to enable someone to have

20  Wi-Fi connectivity.  While there are other features in a

21  router, the main thing someone would buy a router for is

22  to get Wi-Fi, you know, in their home or their office.

23  Okay?

24           Now, computers, Wi-Fi is also important, but

25  it's one of a number of features that is -- that are

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1    embedded into a computer.

2           And so I wanted to make sure that when doing

3    my analysis, I properly considered the fact that Wi-Fi

4    has a different -- different level of importance to the

5    end product.

6         Q.    Okay.  And does that different number of

7    features, does that also bear on the price point of

8    these products?

9         A.    It does.

10          So, for example, routers typically sell -- at

11   least the ones sold by the Defendants here, range in

12   price from 30 to $60; and for computers that are sold by

13   the Defendants in this case, average 500 to a thousand

14   dollars apiece.

15        Q.    All right.  Now, I understand they have some

16   different features, and computers have more features.

17   Routers are basically there for Wi-Fi.  But do all of

18   these products -- do the Defendants for all of these

19   products advertise that their products provide 802.11n

20   capability?

21        A.    Yes, generally speaking.  Whether it's on the

22   box or it's on promotional materials, technical specs,

23   you can -- you can identify generally whether it has

24   Wi-Fi and what type of Wi-Fi it has.

25        Q.    Now, we haven't talked about one Defendant,

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1    and that's Intel.  What's -- what's Intel's role in this

2    case?  How do they fit in?

3         A.   So Intel, as we've heard, is a component

4    supplier.  So they supply a chip to the router companies

5    and the laptop Defendants, and that -- it is what, in

6    part, enables these products to use Wi-Fi.

7         Q.   How did they end up in the case?

8         A.   Well, Ericsson did not file suit against

9    Intel.  Intel asked the Court to intervene or to get

10   involved in the case.  And I don't believe any of the

11   other chip makers asked to be involved in the case.

12        Q.   Did you calculate a reasonable royalty that

13   Intel should pay?

14        A.   I did not.

15        Q.   Why not?

16        A.   Because based on my review of the agreements

17   and looking at the standard practice within the

18   industry, the agreements would typically be between

19   Ericsson and the companies that make the end user

20   products.

21             So in this case, it would be the Belkins and

22   the D-Links and the -- you know, the Defendants in this

23   case.

24        Q.   Well, I think you just said it, but how do

25   you -- how do you know that would be the case?

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 1     A.   Because that's the -- that's what Ericsson has

 2   actually done.  I mean, they -- and that's industry

 3   practice, where they -- the actual agreements that they

 4   did -- where they did enter into agreements with other

 5   companies, those agreements were with companies that

 6   made computers and end user products like routers and

 7   other devices.

 8     Q.   Now, in opening, Defendants' counsel suggested

 9   that the royalty rate should be based on the price of

10   Intel's chip today.  Why is that not appropriate?

11     A.   Because the price of the chip is not relevant

12   in determining the royalty.  Regardless of where

13   Wi-Fi -- or better yet, the Ericsson's patents related

14   to Wi-Fi, regardless of where it resides, whether it

15   resides in a chip or something beyond a chip, companies

16   have nevertheless been willing to pay Ericsson a market

17   rate for their technology.

18         And the market rate they've been willing to

19   pay is in the neighborhood of 50 cents per unit, and

20   that's based on the sales of the end user products.

21     Q.   Mr. Bone, what about the truck antenna example

22   Defendants used in opening?  Are you asking this jury to

23   award a percentage of the price of the truck on an

24   antenna?

25     A.   No.   That example is, you know, a little

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1  bit -- I don't want to say misleading, but it's --

2  it's -- if the market has determined the value of the

3  technology -- so, in other words, if you saw the picture

4  where they highlighted the antenna, if the markets

5  determine the value of the antenna to be 50 cents, then,

6  you know, to ask Ford or GM to pay a 50-cent rate is not

7  unreasonable.

8            Now, it would be a different story if the rate

9  was expressed as a percent of the revenue.  So, in other

10  words, you said, okay, well, if I took the -- a very --

11  a rate for an antenna, and I took that and applied it to

12  the entire price of the truck, I agree that would not

13  be -- that would not be proper.

14            And that's not what we've done in this case.

15  That's why the analysis is focused on a per-unit basis.

16  So the value is on a per-unit basis regardless of

17  whether it's in a router or a laptop.

18      Q.   Okay.  Well, why not calculate an amount that

19  Intel needs to pay as a reasonable royalty?

20      A.   So I understand that if -- if the jury finds

21  the Defendants infringe Ericsson's technology and you

22  determine a royalty, then it's my understanding that the

23  Court would not require any additional royalty from

24  Intel based on the sales made by the Defendants.

25      Q.   Okay.  Now, for the accused devices that are

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1  in this case, what percentage of those use Intel chips?

2       A.   Based on my analysis, 9 percent of the

3  products that infringe use Intel chips.

4       Q.   9 percent?

5       A.   9 percent.

6       Q.   Okay.  Now, you mentioned that this is a

7  unique case and that there's a number of cases that have

8  licensed Ericsson's patented technology in the real

9  world.  What types of companies have permission to use

10 Ericsson's patented technology today?

11      A.   So you see a number of them here on the

12 screen, and I'll quickly go through them.

13           So -- and a number of these, Ms. Petersson

14 already mentioned:  RIM, which is also known as

15 BlackBerry, has taken a -- taken a license to Ericsson's

16 patents.

17           HP has entered into a license for the 802.11

18 patents with Ericsson.

19           Option, Buffalo, Ascom, Nokia, Motorola, and

20 Sonim.

21      Q.   And so we'll go through those one by one, but

22 just as an overview, do some of these companies compete

23 with the Defendants in this case?

24      A.   Yes, they do.  So a number of these companies,

25 like for example, HP, make computers.  I don't know if

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1   we have an HP computer here.

2           So we have an HP computer here, and those

3   computers compete with the computers that the Defendants

4   make.

5       Q.   Okay.  Now, the licenses here that these

6   companies have taken, are they just for Ericsson's Wi-Fi

7   or 802.11 portfolio?

8       A.   Well, they -- a couple of them are just for

9   the 802.11 portfolio, but others include rights to the

10  802.11 portfolio plus other patents.

11          But the agreements, or at least the ones I

12  focused on, are structured in a way that I was able to

13  identify and tease out the value of the 802.11 -- the

14  value for the 802.11 patents.

15      Q.   Okay.  You kind of preempted my next question

16  there.

17          For these -- for these companies, did you rely

18  on all of these licenses in calculating the reasonable

19  royalty rate?

20      A.   No.  Two of the -- two of the agreements,

21  particularly, the Nokia agreement and the Motorola

22  agreement, were parts of much bigger business deals.

23          And so the terms of the agreements were so

24  complex -- and I didn't have information from which to

25  actually tease out or understand the value for the

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1  802.11 technology, so those two agreements were not

2  helpful at the end of the day.

3       Q.   Okay.  I understand this case is unique in

4  that you have these real-world licenses, but why do you

5  focus on those?

6       A.   Well, the -- the agreements -- the actual -- I

7  think they're very instructive in terms of what the

8  market rate is for Ericsson's technology.  And so in a

9  way they are -- what I would describe as comparable

10  license agreements.

11       Q.   Okay.  Is a patent a simple thing to assign

12  value to?

13       A.   No.  You know, it's funny -- well, not funny.

14            But you can't go into Walmart or Best Buy and

15  look on the shelf and see what Ericsson is -- is willing

16  to license their 802.11 portfolio for.  So there's not a

17  readily-accessible way to determine that.

18            So what financial analysts like me do is we go

19  to and we look at what other companies have been willing

20  to pay for the technology.

21            And to the extent we can identify what other

22  people have paid, that's an indication of the market

23  value for the technology.

24       Q.   Are there any other reasons why looking at

25  these market rates is important?

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1      A.    Yeah.   So there's several reasons why I think

2  market rates are very instructive, and this is really

3  important.

4             First off, market rates will tell you how much

5  the technology is worth relative to everything else

6  that's in a product.

7             Now, the Defendants will try to paint the

8  picture that, you know, the Wi-Fi or the Ericsson's

9  802.11 patents really aren't worth much in light of all

10  the other features in the routers or the laptops, but

11  that doesn't make sense when you think of all the

12  companies that have been willing to pay Ericsson a rate

13  for that technology.

14             So another reason why a market rate is helpful

15  is that it takes into consideration options -- the

16  design-around options.   You may hear the other side --

17  the Defendants talk about, well, you know, we had really

18  inexpensive ways to work around these patents, so that's

19  a -- that's a way of determining how much something's

20  worth is what my other options are.

21             Well, the Defendants -- excuse me, the

22  companies that actually took a license from Ericsson use

23  the same chips that are used in the Defendants'

24  products, so they theoretically would have the same

25  design-around options.

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1          But -- so that doesn't seem to make sense

2   because despite that, companies -- a number of companies

3   were nevertheless willing to pay Ericsson a rate for

4   their technology -- again, in the neighborhood of 50

5   cents per unit.

6          And another reason why that's important -- and

7   this is the last one -- is that it takes into

8   consideration the price of components.  So, again,

9   you've -- I think we heard in opening, and I'm sure

10  we'll hear it later, that it's crazy to think that a

11  50-cent royalty -- that somebody would pay a 50-cent

12  royalty when the chip only costs $2, okay?

13         Well, again, the companies that you see in the

14  screen buy the same chips that the Defendants use and

15  they pay the same price for those chips; yet despite

16  that, they were willing to pay a market rate for

17  Ericsson technology -- again, in the neighborhood of 50

18  cents per unit.

19     Q.   Now, did these companies, when entering into

20  negotiations with Ericsson and taking a license, did

21  they know what each other paid?  Did HP know what RIM

22  paid and what Buffalo paid and vice versa?

23     A.   No.

24         So all of these negotiations and the license

25  agreements that come out of the negotiations are all

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1   confidential.  So RIM had no idea what Buffalo or

2   what -- what Ascom or Option or Sonim paid.  And so, you

3   know, they -- they each went into these negotiations

4   independently.  They couldn't benefit from knowing what

5   other companies paid.

6           Despite that, the companies actually reached

7   an agreement, and they've all entered into agreements

8   and paid rates that are in the same ballpark.  So what

9   that tells me is that you have a number of companies

10  that came in, entered into negotiations with Ericsson,

11  and put a similar value on their technology.

12      Q.   Well, what about in the 2007 hypothetical

13  negotiations that you need to deal with?  Would the

14  Defendants know what these companies paid?

15      A.   Yes.  So this is another reason why a

16  hypothetical negotiation is different, and it has an

17  impact on what the parties would have agreed to.

18          So, unlike all the companies you see on the

19  screen here who didn't have the benefit of what other

20  people paid in the hypothetical negotiation, the Court

21  requires us to consider all information.

22          And the way they describe that, it's like --

23  they say it's like playing poker with your cards face

24  up.  Everybody knows everybody's negotiating, all the

25  information.  And so in the hypothetical negotiation,

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1    Dell, D-Link, Buffalo, they would all know the rates

2    that RIM, HP, Buffalo -- excuse me, I misspoke, I put

3    Buffalo on both sides.  But let me restate that.

4           So the Defendants in this case, Dell -- and

5    then Dell and Toshiba and Acer and the router

6    Defendants, NETGEAR, Belkin, and D-Link, would all

7    benefit and they would all know what these other

8    companies paid.  They'll know what RIM paid.  They'll

9    know what HP paid.

10     Q.    Buffalo already has a license, right?

11     A.    Buffalo has a license, yes.

12     Q.    Now, does that -- does that make sense in --

13   in terms of the timing, we'll get into these licenses,

14   but some of them are after 2007, right?  How would the

15   Defendants in a 2007 negotiation know what these

16   Defendants -- or what these licensed companies paid?

17     A.    Right.  So that's another one of these

18   assumptions and things that make the hypothetical

19   negotiation different.  And, that is, we have the

20   benefit of peeking forward.

21          So, although the hypothetical negotiation

22   would have occurred in 2007, they have the benefit of

23   peeking forward.  They call it the book of wisdom.  And

24   this actually comes from a Supreme Court case, and I'm

25   not -- but it allows folks like me, financial experts,

1  to consider information beyond the date of the

2  hypothetical to determine what the parties would have

3  agreed to.

4      Q.   Okay.  Let me back up to something you said a

5  little while ago.  You mentioned comparables and using

6  these licenses and market rates as comparables.  What

7  did you mean by that?

8      A.   So what I mean by comparables is that it's the

9  use of something else -- or looking to some other -- I

10  can use an example.  I don't know if we have a slide for

11  that.

12      Q.   Yes.

13      A.   Okay.  Let's assume for a moment that I've got

14  a 2005 GMC Sierra that I'm looking to sell, okay?  But I

15  have no idea how much I could sell the truck for.

16          Well, one way I could do that is go on to a

17  website and look for comparables.  In other words, look

18  for other trucks that have similar attributes to help me

19  figure out how much I should sell my truck for.

20          So in this case, if I've got a high-mileage

21  2005 Sierra truck, I might compare it with the 2007

22  Sierra truck that I see here on the screen.

23          It also has high mileage, so I might say,

24  well, $11,500 might be a good starting point, but, you

25  know, my car is two years older.  So I would probably

1  have to bring the price down a little bit, okay?

2        So that's an example of how you might use a

3  comparable as a basis for determining the value of

4  something.

5     Q.   Okay.  And if you need to bring it down a

6  little bit, what -- what are you doing there?  Are you

7  making an adjustment?

8     A.   Yes.  So what we do -- and so I guess to make

9  the connection between this and what I'm doing in any

10 analysis is that I've looked at the actual agreements

11 that the parties have entered into.  And since these are

12 all bilateral negotiations -- in other words, they're

13 one-on-one negotiations and they factor in a bunch of

14 different things, that -- and there is a variance in the

15 rates, they need to be adjusted up or down, depending on

16 the differences in those agreements and how they would

17 compare with the licenses that the Defendants in this

18 case would take.

19    Q.   Okay.  Well, before we get to our adjustments,

20 let's -- or our trucks or each of the licenses, and to

21 do that, let's walk through them one by one and talk

22 about the terms.

23              THE COURT:  Counsel, I think it's close

24 enough to 4:00.  It sounds like this might be a good

25 stopping place.

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 1                   MR. CAMPBELL:  Yes, Your Honor.  It is.

 2                   THE COURT:  Very well.  We'll go ahead

 3   and stop for the day today.

 4                   Ladies and Gentlemen of the Jury, again,

 5   thank you for your attention today.  You've been a very

 6   good jury, and I hope you have a good evening this

 7   evening.

 8                   Please remember my instructions.

 9   Don't -- no investigation, no discussion of the case

10   with anyone.  And we'll see you back here at 9 o'clock

11   in the morning.

12                   The Jury is excused.

13                   COURT SECURITY OFFICER:  All rise.

14                   (Jury out.)

15                   THE COURT:  Please be seated.

16                   All right.  Let me give the parties their

17   times.  Plaintiff has expended 8 hours and 33 minutes,

18   and Defendants 3 hours and 35 minutes.

19                   Let me inquire.  Do Plaintiffs anticipate

20   resting tomorrow?

21                   MR. CAWLEY:  Yes, Your Honor.

22                   THE COURT:  Okay.  Defendants be prepared

23   to move forward?

24                   MR. VAN NEST:  Yes, Your Honor, we will

25   be.

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 1                    THE COURT:  Okay.  Very well.

 2                    All right.  Let me just ask timing wise,

 3  anybody feeling like they're going to be able to give

 4  back any time?  You think you're going to take your full

 5  15 hours, based upon where we are now?  Seems to be

 6  going -- clipping along rather well, it seems like.

 7                    MR. CAWLEY:  We might give back a little

 8  time, Your Honor.

 9                    THE COURT:  Okay.  Couple of hours?

10                    MR. CAWLEY:  I don't know about that.

11                    THE COURT:  This is called negotiation --

12                    [Laughter]

13                    THE COURT:  -- no.

14                    MR. VAN NEST:  We'd be happy to pick

15  those two up, Your Honor.

16                    THE COURT:  What about Defendants?

17                    MR. VAN NEST:  It's a little early for us

18  to make an estimate.  We have been trying to tamp things

19  down and without getting into our case, I think it's --

20  right now I anticipate needing every one of those hours,

21  but we'll keep looking at it, Your Honor.

22                    THE COURT:  Okay.  All right.  Very well.

23                    All right.  Anything further that the

24  Court can do for you today?

25                    MR. CAMPBELL:  Your Honor, just -- just
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1   as a preview, but tomorrow morning when we start, we're

2   going to get into the licenses.  Just as Ms. Petersson

3   did, we're going to get into the terms that are

4   confidential.  We'll need to clear the courtroom at that

5   time.

6                   THE COURT:  Well, remind me about that in

7   the morning.

8                   MR. CAMPBELL:  I understand.

9                   THE COURT:  Anything further from the

10  Plaintiffs?

11                  MR. CAWLEY:  No, Your Honor.

12                  THE COURT:  Defendants?

13                  MR. VAN NEST:  No, Your Honor.

14                  THE COURT:  All right.  We'll be

15  adjourned.  Have a good evening.

16                  COURT SECURITY OFFICER:  All rise.

17                  (Court adjourned.)

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 1                          CERTIFICATION

 2

 3               I HEREBY CERTIFY that the foregoing is a

 4    true and correct transcript from the stenographic notes

 5    of the proceedings in the above-entitled matter to the

 6    best of our abilities.

 7

 8

 9    /s/ Shea Sloan
      SHEA SLOAN, CSR
10    Official Court Reporter
      State of Texas No.:  3081
11    Expiration Date:  12/31/14

12

13
      /s/ Judith Werlinger
14    JUDITH WERLINGER, CSR
      Deputy Official Court Reporter
15    State of Texas No.:  731
      Expiration Date  12/31/14
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